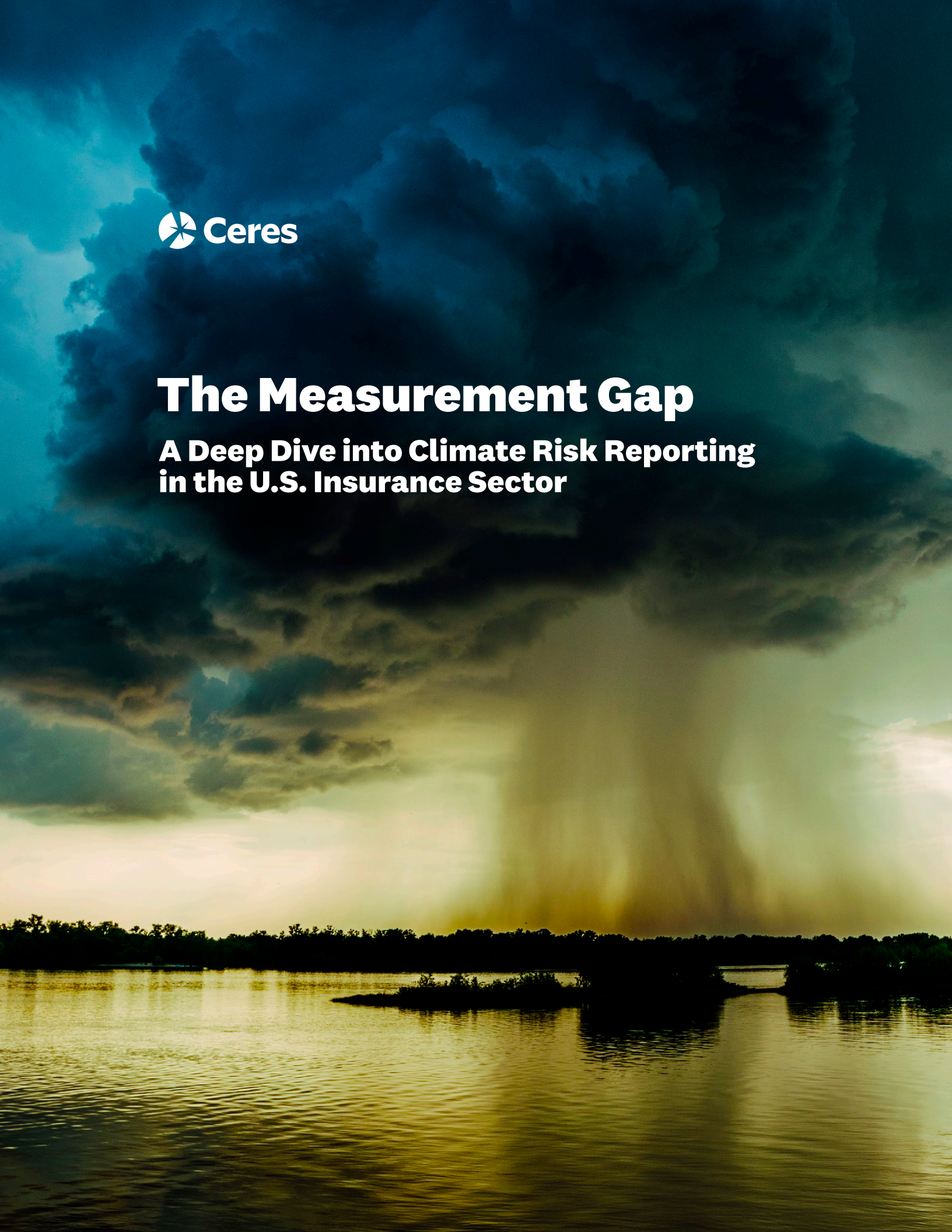

Ceres

The Measurement Gap

A Deep Dive into Climate Risk Reporting in the U.S. Insurance Sector

Acknowledgments

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About Ceres

Ceres is a nonprofit advocacy organization working to accelerate the transition to a cleaner, more just, and resilient economy. With data-driven research and expert analysis, we inspire investors and companies to act on the world's sustainability challenges and advocate for market and policy solutions. Together, our efforts transform industries, unlock new business opportunities, and foster innovation and job growth—proving that sustainability is the bottom line. For more information, visit ceres.org.

About Ceres Accelerator for Sustainable Capital Markets

The Ceres Accelerator for Sustainable Capital Markets is a center within Ceres that aims to improve the practices and policies that govern capital markets by engaging federal and state regulators, financial institutions, investors, and corporate boards to act on climate change as a systemic financial risk. For more information, visit ceres.org/accelerator.

About the Report

This report by Ceres analyzes and presents findings from insurance company responses to the National Association of Insurance Commissioners' (NAIC) reporting year 2023 Climate Disclosure Survey, which is aligned with the Task Force on Climate-related Financial Disclosures (TCFD) framework for climate risk disclosure. These reports were submitted to the California Department of Insurance in the fall of 2024. This report provides insights of value to insurance regulators, insurers,

and other stakeholders. Ceres believes this analysis will encourage continual improvement in the comprehensiveness and usefulness of climate-related disclosures in future years. Ceres commissioned AI-powered software provider Manifest Climate to measure TCFD-alignment with a machine learning-based algorithm.

To search for a specific NAIC Climate Risk Disclosure Survey submission, refer to the California Department of Insurance Results site.

Our interactive dashboard provides comprehensive TCFD pillar, recommendation, and action item results by company, group, and line of business. The dashboard offers a user-friendly interface to explore and analyze the data. Click here for a video tutorial on navigating the dashboard and the information available.

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Executive Summary

The National Association of Insurance Commissioners' (NAIC) Climate Risk Disclosure Survey, which utilizes the Task Force on Climate-related Financial Disclosures (TCFD) framework, has provided three years of systematic data on insurance industry climate disclosure practices. Ceres' comprehensive analysis of these annual surveys reveals a persistent performance gap in climate risk measurement. While insurers achieve high reporting rates in governance (87%), strategy (97%), and risk management (99%) disclosures, the metrics and targets pillar remains at only 29% of insurers providing any information under this pillar, unchanged for three consecutive years of Survey reporting.

This companion report to Ceres' 2025 analysis of Survey responses examines this disparity and its implications for the insurance sector.

Ceres' analysis, conducted with Manifest Climate, looks at the 45 insurance groups that provided information across all three recommendations within the Metrics and Targets pillar. The analysis, designed to pinpoint leading practices and gaps among insurers with the most reporting in this pillar, reveals what we term "The Great Measurement Gap."

While nearly 87% of the sample carrier groups establish comprehensive climate targets, encompassing both adaptation measures to manage climate risks and mitigation efforts to reduce emissions, there remains a critical gap in accountability mechanisms. For mitigation specifically, 0% provide the absolute emissions[1] targets necessary to track progress toward net-zero commitments, despite many insurers making such pledges. This disconnect is particularly notable given that adaptation targets, while essential for the insurance sector's core risk management function, cannot substitute for clear emissions reductions accountability where mitigation commitments have been made. Three of the organizations analyzed achieve a "fully compliant"[2] metric and target reporting performance, indicating that improvement is feasible but rare.

The 2025 Ceres analysis of 526 insurance groups representing 85% of the U.S. market confirms this pattern across the broader industry. With record-breaking severe weather events in 2024 resulting in $135 billion in total global insured disaster losses, and the 2025 wildfires in Los Angeles exceeding $250 billion in economic impacts alone, these figures underscore the business materiality of climate measurement and target-setting capabilities.

Key Findings

- **Limited target setting adoption:** Minimal reporting across all scope-specific absolute emissions targets (scope 1, scope 2 location/market-based, and scope 3 financed emissions[3])
- **Critical scope 3 gap:** Near-complete absence of reporting for the 15 scope 3 emissions categories beyond financed emissions, despite these representing the majority of insurers' climate impact
- **Weak progress tracking:** Severely limited implementation of quantitative progress monitoring and baseline management, even among more engaged reporters
- **Analytical capacity disconnect:** While scenario analysis shows a broader adoption (indicating existing analytical capabilities), these same capabilities are not being deployed for foundational measurement requirements such as quantifying portfolio exposure to physical climate risks, tracking financial impacts from climate-related claims, or measuring the effectiveness of adaptation investments.

This companion report is designed to serve as a practical resource for the industry and is an expansion of Ceres' 2025 analysis. Incorporating real-world examples from actual carrier Climate Risk Disclosure Surveys submitted in the last reporting year, the aim is to encourage more robust metrics and targets reporting under the TCFD framework to support more informed risk pricing, enhance market stability assessment, and enable stakeholders to better evaluate insurers' climate preparedness as this area continues to develop and mature across the insurance sector.

This analysis used Manifest Climate's proprietary AI platform to evaluate whether corporate disclosures addressed 53 key sustainability data points aligned with the Metrics & Targets pillar of leading global standards, including CSRD and ISSB. Manifest Climate's methodology transforms complex ESG frameworks into structured prompts and applies advanced language models to identify, analyze, and classify relevant content across a wide range of report formats. The review was commissioned by Ceres and covered disclosures from the following 45 organizations:

AFLAC · AIG · ALLIANZ Group · American Family Group · AXA Insurance Group · Aegon US Holdings Group · Anthem Blue Cross Life & Health Insurance · Arch Capital Group · Assurant Inc Group · Athene · Axis Insurance · Beazley Group · CNO Financial Group · Cigna · Equitable Holdings · Everest Group · General Security National Insurance · Globe Life · Great-West Lifeco · The Hartford · HDI Global Insurance · Highmark · Industrial Alliance Group · Intact Financial · John Hancock · Liberty Mutual · MAPFRE Insurance Group · MAPFRE PRAICO Corp · Minnesota Mutual Group · MassMutual · Munich Re · New York Life Insurance · Nippon Life Insurance Company of America · Progressive · Prudential of America · QBE Insurance Group Limited · RGA Inc Group · Sompo Holdings · State Farm · Sun Life · Swiss Re · TIAA · Travelers · US Health and Life Insurance · Zurich Insurance

The Measurement Crisis: Understanding the 29% Plateau

The TCFD Metrics and Targets Framework

The TCFD framework includes three specific recommendations under the Metrics and Targets pillar that organizations must address to demonstrate comprehensive climate risk management:

- **Recommendation 1: Climate-Related Metrics Disclosure** requires organizations to disclose the metrics used to assess climate-related risks and opportunities in line with their strategy and risk management processes. For insurance organizations, this includes underwriting portfolio exposure metrics, investment portfolio climate alignment measures, and operational resilience indicators that enable stakeholders to understand how climate factors affect business performance.
- **Recommendation 2: Greenhouse Gas Emissions Reporting** mandates disclosure of scope 1, scope 2, and relevant scope 3 emissions along with related risks. This recommendation is particularly significant for insurers given that scope 3 emissions usually represent over 90% of their total climate footprint, making comprehensive emissions measurement essential for understanding actual climate risk and impact.
- **Recommendation 3: Climate Targets and Performance** requires organizations to describe reduction targets used to manage climate-related risks and opportunities along with performance against these targets. This enables stakeholder assessment of organizational commitment and progress while providing accountability mechanisms that drive actual emissions reductions rather than aspirational commitments.

Industry Performance Gap

The insurance sector exhibits a disconnect between climate risk understanding and measured implementation. Insurers demonstrate expertise in governance, strategy, and risk management disclosures yet systematically underperform in translating this knowledge into the measurable management systems required by the Metric and Target recommendations. The persistence of the 29% reporting plateau across multiple reporting years suggests structural barriers rather than temporary implementation challenges.

This analysis focused on the 45 insurance groups that demonstrated the most comprehensive engagement with the Climate Risk Disclosure Survey by providing responses across all three TCFD

Metrics and Targets recommendations- representing the industry's most advanced reporters in this area. Even these organizations, which made efforts to address the complete range of recommendation requirements, revealed substantial implementation gaps that underscore the extensive work still required across the industry.

This performance pattern creates positioning opportunities for organizations that develop measurement capabilities. In a sector where most insurers appear to struggle with metric and target reporting, those achieving competence across all three recommendations may establish competitive advantages through regulatory positioning, investor confidence, strategic decision-making capabilities, and market differentiation. External pressures including regulatory evolution of mandated reporting, market disruptions, and investor requirements continue intensifying the business case for the accelerated development of metric and target comprehensiveness as traditional risk models face challenges from material climate impacts.

Current State Analysis: Mapping the Measurement Gap

Target Setting Performance

The insurance industry's metrics and targets performance exhibit a dichotomy between comprehensive target establishment and operational specificity. The 45 carriers analyzed here demonstrate strong performance in establishing climate targets, achieving nearly 87%, or 39 insurer groups, achieving a fully aligned reporting status in comprehensive climate target establishment. This performance reflects organizational recognition that climate commitments serve as stakeholder communication tools while providing directional guidance for transformation.

However, performance declines when examining specific internal operational requirements such as establishing baseline years with comprehensive scope coverage, setting quantitative reduction percentages with defined timelines, implementing third-party verification protocols, maintaining separate measurement frameworks for distinct emission sources, and developing progress tracking mechanisms that enable variance analysis and management accountability. Analysis shows none of the insurers achieving a fully compliant status for absolute emissions targets across all 45 organizations examined here. This gap prevents organizations from demonstrating positive climate impact independent of business growth or contraction, limiting accountability and stakeholder confidence.

Figure 1 · Placeholder

Leading Practice

Company A: Established comprehensive climate targets including net-zero by 2050, interim 2030 targets, and sector-specific commitments. Targets serve as effective stakeholder communication tools while providing directional guidance for transformation.

Critical Gap—Absolute Targets

Company B: Climate target states "reduce carbon intensity by 50% by 2030" but provides no baseline methodology, progress tracking mechanism, or absolute reduction commitment. When business grows 30% while intensity improves 20%, absolute emissions actually increase despite "target achievement."

Scope-Specific Performance Analysis

Scope 1 Emissions Performance

The insurance industry's performance in scope-specific emissions target setting reveals both the complexity of operational decarbonization and the substantial competitive advantages available to organizations that embrace granular measurement across their direct operations. With minimal reporting of absolute scope 1 targets and intensity-based measures, this area represents one of the largest opportunities to improve insurance industry metric and target setting performance while simultaneously offering the most accessible pathway for organizations seeking to establish measurement excellence and transparency. Scope 1 emissions provide an ideal starting point for organizations developing measurement capabilities because they represent emissions sources under direct organizational control, typically involve well-established measurement methodologies, and offer clear pathways for operational intervention and improvement.

Figure 2 · Placeholder

Leading Practice

Company C: Established absolute Scope 1 targets with annual reduction commitments, implemented energy management systems across more than 200 facilities, and achieved significant reduction over three years through HVAC upgrades and fleet electrification.

Improvement Opportunity

Company D: Operates 150 offices and a 500-vehicle fleet but has no scope 1 targets, no emissions tracking beyond estimated calculations, and no energy management protocols. Emissions data is estimated annually using industry averages rather than actual consumption.

Best practice implementation in scope 1 management demonstrates the transformation from stated commitments to operational accountability through precise target setting that enables investment prioritization, vendor management, and performance assessment. Leading insurers establish absolute reduction targets with specific timelines and baseline years that reflect current business conditions rather than outdated historical references, combined with comprehensive methodology documentation that enables both internal management and external verification. Implementation frameworks for scope 1 excellence require systematic approaches across fleet electrification strategies, building energy efficiency improvements, natural gas reduction through renewable heating systems, and facility consolidation programs that integrate climate targets into broader operational excellence rather than treating them as separate compliance requirements.

Scope 2 Emissions Opportunities

Scope 2 emissions present enhanced opportunities for insurance organizations to achieve significant climate impact through strategic energy procurement decisions that can simultaneously deliver cost advantages, operational benefits, and competitive differentiation. However, industry performance

remains limited, with only a few carriers reporting both location-based and market-based target setting, indicating substantial untapped potential for carriers seeking to demonstrate climate leadership while potentially achieving financial benefits through sophisticated energy management. The complexity of scope 2's measurement and management reflect the intersection of operational efficiency, energy market dynamics, and climate accounting methodologies, yet this complexity also creates opportunities for competitive differentiation as organizations that master scope 2 management can achieve both climate risk and business opportunity objectives.

Figure 3 · Placeholder

Leading Practice

Company E: Implemented market-based accounting with virtual power purchase agreements covering a majority of electricity consumption, achieving cost savings while supporting renewable development. Demonstrates strategic energy procurement excellence.

Missed Opportunity

Company F: Spends $12M annually on electricity across 300 locations but has no renewable energy strategy, no energy procurement expertise, and uses only location-based accounting. Could achieve substantial emissions reduction through strategic renewable procurement while potentially reducing costs.

Excellence in scope 2 management requires dual reporting frameworks that address both measurement complexity and strategic opportunity through a sophisticated understanding of energy market dynamics and climate accounting requirements. Leading practices establishes both location-based targets that reflect grid decarbonization benefits while maintaining accountability for direct energy efficiency improvements, and market-based pathways that leverage renewable procurement strategies including on-site renewable generation and green tariff programs[4]. Strategic implementation requires cross-functional collaboration between sustainability, finance, legal, and operations teams supported by external expertise in energy markets. This collaboration should be paired with comprehensive approaches spanning energy efficiency measures that provide foundational cost reductions supporting renewable energy investments, while also demonstrating operational excellence that enhance organizational reputation and stakeholder confidence.

Scope 3 Critical Gaps

Scope 3 emissions represent simultaneously the greatest challenge and the most significant opportunity for insurance industry climate risk management leadership, encompassing emissions from investing and underwriting portfolios that typically account for 80-90% of total organizational emissions footprint. Scope 3 management determines organizational climate impact much more than direct operations while offering the potential for systemic influence that extends far beyond individual company boundaries, yet industry reporting performance remains extremely limited; with near-zero compliance within the sample group for financed emissions targets and negligible response rates for

most other scope 3 categories. The technical complexity of scope 3 measurement and management reflects the indirect nature of insurance industry climate impacts through their financial services that enable and influence economic activities across the entire economy, again creating both challenges and opportunities for organizations that develop sophisticated capabilities.

Figure 4 · Financed Emissions

Leading Practice

Company G: Established science-based financed emissions targets, developed portfolio carbon assessment capabilities, and implemented sector-specific reduction strategies for high-carbon industries representing a significant portion of underwriting portfolio.

Critical Gap

Company H: Underwrites $2B annually in fossil fuel and heavy industry sectors but has no financed emissions measurement, no portfolio carbon assessment, and no consideration of climate risk in underwriting decisions. Financed emissions likely exceed operational emissions by orders of magnitude.

Figure 5 · Other Scope 3 Categories

Leading Practice

Best practice: Comprehensive value chain assessment with supplier engagement programs, travel emission reduction policies, and procurement criteria that include carbon impact considerations across all major scope 3 categories.

Industry Standard Gap

Company I: Has extensive supply chains, business travel, and purchased services but tracks no scope 3 categories beyond estimated calculations. No supplier engagement, no travel policies addressing emissions, no procurement criteria considering carbon impact.

Best practices here would demonstrate systematic approaches that deliver measurable climate benefits while maintaining financial performance and fiduciary responsibilities through comprehensive frameworks aligned with Partnership for Carbon Accounting Financials (PCAF) standards, the global standard for measuring greenhouse gas emissions associated with a financial institution's lending and investment activities. The PCAF methodology enables consistent, transparent measurement of financed emissions across asset classes including listed equity and corporate bonds, business loans and unlisted equity, project finance, commercial real estate, mortgages, and motor vehicle loans, establishing category-specific targets for materials emissions sources while supporting supplier engagement programs that drive value chain decarbonization

and strengthen operational relationships. The PCAF Standard *Part C–Insurance-Associated Emissions*, released in November 2022, provides methodological guidance for measuring and reporting the GHG emissions associated with reinsurance and insurance underwriting.

For insurance companies, insurance-associated emissions represent a critical and growing component of scope 3 accounting that extends beyond traditional financed emissions from investment portfolios to encompass underwriting activities where insurers enable carbon-intensive economic activities through risk transfer services. PCAF's Part C methodology provides standardized guidance for measuring these insurance-associated emissions, which are GHG emissions in the real economy associated with specific re/insurance policies, measured using the "follow the risk" principle rather than the "follow the money" approach used for financed emissions.

Under PCAF's methodological framework, insurance-associated emissions encompass underwriting activities across diverse commercial sectors spanning energy production, manufacturing, transport, and real estate operations. Attribution methodologies utilize premium-revenue calculations that capture the insurance sector's enabling function in business operations, distinct from owner-based financial relationships. This framework addresses these measurement complexities unique to insurance relationships, which center on risk transfer rather than capital investment; providing globally consistent measurement approaches for insurance-associated emissions reporting.

Progress Reporting and Management Systems

Analytical Capability Gaps

Progress reporting capabilities also show systemic limitations across the insurance sector, with many organizations attempting measurement but seemingly lacking the analytical capabilities required to translate data into management insights. This pattern is evident in how many carriers report combined metrics rather than granular, standalone measurements that enable precise tracking and accountability.

Figure 6 · Placeholder

Leading Practice

Company J: Produces quarterly progress reports with variance analysis, trend identification, and corrective action plans. Management dashboards track performance against targets with clear accountability mechanisms and regular board reporting.

Improvement Opportunity

Company K: Reports annual emissions estimates but provides no trend analysis, no comparison to targets, no variance explanation, and no corrective actions. Board receives high-level sustainability updates with no quantitative progress assessment.

Leading practice frameworks integrate multiple reporting elements to provide comprehensive performance assessment rather than simple data presentation. Such integration demonstrates a sophisticated understanding of how measurement data supports strategic decision-making and stakeholder communication, through annual emissions inventories with third-party verification, progress assessment against targets with variance analysis, and decomposition analysis that separates emissions changes into underlying drivers including business growth, operational efficiency, and specific climate initiatives. This analytical approach transforms simple target tracking into strategic intelligence that supports business optimization and competitive positioning. This approach provides both evidence-based assessment of intervention effectiveness and forward-looking projections that enable proactive management adjustments rather than reactive responses to performance gaps.

Stakeholder communication excellence requires translating technical emissions data into business insights that enable decision-making and accountability assessment by diverse audiences. Through effective and accessible reporting, emissions performance is inextricably linked to business strategy, operational initiatives, and financial outcomes while demonstrating climate integration into core business processes. Best practice approaches utilize visual presentation of complex data through charts, graphs, and infographics that enhance accessibility, combined with regular reporting schedules aligned with business planning cycles that integrate climate performance into broader management processes. Rather than treating sustainability reporting as separate from business performance and strategy, these approaches demonstrate organizational commitment to climate integration and strategic alignment.

Baseline Management Challenges

Progress reporting represents the operational heart of measurement and target setting excellence, transforming measurement data into management insights and stakeholder communication that enables both internal decision-making and external accountability. However, the industry demonstrates widespread gaps in the analytical capabilities required for effective climate risk management and stakeholder communication. The persistent weakness in progress reporting reflects deeper challenges in organizational capability development that extend beyond technical measurement to encompass data analysis, stakeholder communication, and management accountability systems that distinguish effective climate management from basic compliance efforts.

Figure 7 · Placeholder

Leading Practice

Company L: Established comprehensive baseline with third-party verification, documented methodology, and restatement procedures. Maintains data quality protocols and ensures consistency across reporting periods.

Improvement Opportunity

Company M: Uses 2020 as baseline (pandemic year), employs inconsistent calculation methods, and has restated emissions multiple times without clear justification. Progress comparisons are unreliable due to methodological changes.

Analysis reveals carriers frequently rely on historical baselines from 2007 or earlier, reporting combined scope 1 and 2 reductions rather than maintaining separate baselines that enable precise tracking of distinct emissions sources. For instance, carriers report impressive reductions from these historical baselines but struggle to establish standalone targets that would demonstrate current operational control with clear strategic priorities. This focus on operational emissions, while important for accountability, overlooks the industry's greatest climate leverage through financing and underwriting targets that could drive meaningful decarbonization across investment portfolios and insured activities.

Best practices in baseline management requires dynamic measurement foundations that reflect current business realities while maintaining accountability for long-term performance trends through comprehensive coverage and methodological documentation that enables both stakeholder understanding and internal management accountability. Leading practice approaches establish separate baselines for different emission scopes that recognize their distinct operational and strategic drivers, with a clear rationale for and documentation of baseline selection, and updates that establish stakeholder understanding while supporting third-party verification processes. Best practice frameworks balance the accuracy benefits of regular baseline updates against the accountability benefits of stable long-term references, typically maintaining both current baselines for operational management and historical baselines for long-term accountability. Equally important is ensuring a comprehensive scope coverage that addresses all material emission sources without double-counting across categories.

For insurance companies, comprehensive scope coverage and scope 3 emissions are particularly critical because they encompass the vast majority of the organization's actual climate impact through investment portfolios that finance carbon-intensive activities and underwriting operations that enable high-emission industries to operate be providing essential risk transfer services. Without comprehensive scope measurement inclusive of scope 3, insurers are effectively managing only 10–20% of their total climate footprint while remaining blind to their most significant environmental impacts. This makes scope 3 and comprehensive measurement essential for organizations seeking to understand and manage their role in either accelerating or constraining the transition to a low-carbon economy.

Dynamic Target Management

Scenario analysis capabilities vary significantly across the insurance sector, with some insurers developing strategic planning capabilities while others have yet to incorporate diverse climate scenarios into their risk assessment frameworks. Carriers range from those that have not yet incorporated any climate scenarios, including 1.5°C compatible scenarios, to those that have integrated comprehensive scenario analysis aligned with IPCC pathways and supported by initiatives like the Science Based Targets initiative (SBTi) and Net-Zero Asset Owner Alliance protocols.

Figure 8 · Placeholder

Leading Practice

Company N: Conducts annual scenario analysis across 1.5°C, 2°C, and 3°C pathways, assessing physical and transition risks for both operations and investment portfolios. Results inform strategic planning and risk management.

Improvement Opportunity

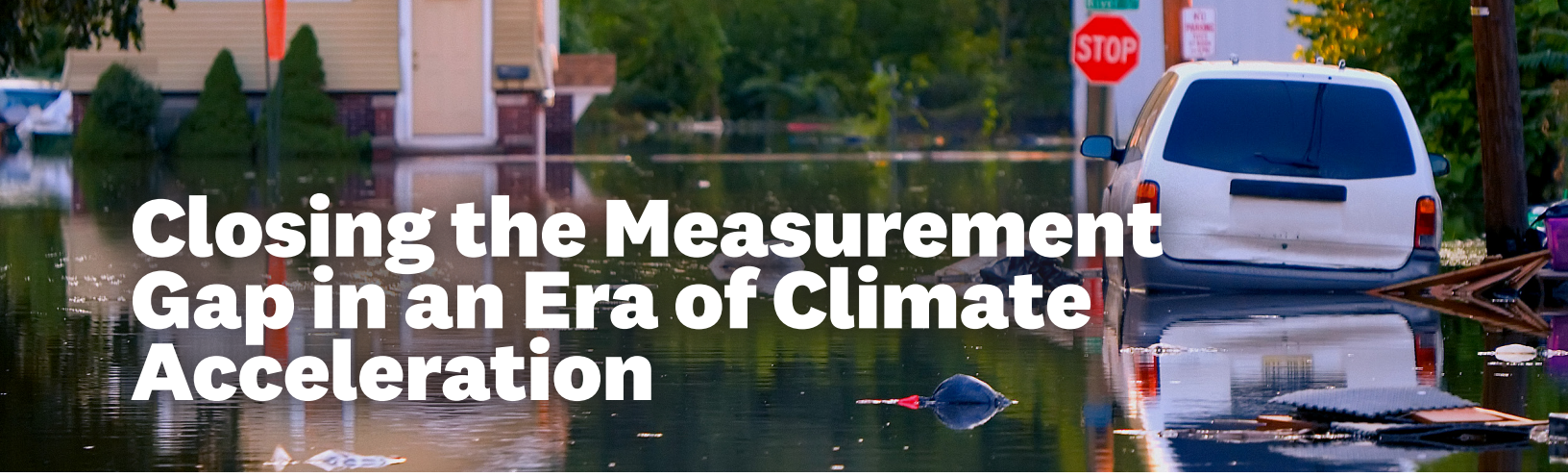
Company O: Recognizes climate risk in enterprise risk management but conducts no quantitative scenario analysis, has no climate stress testing, and lacks analytical capabilities to assess portfolio vulnerability to transition risks.

This variation in analytical capabilities suggests that while some insurers are developing advanced approaches incorporating sector-specific methodologies and assumptions about future regulatory changes, customer behavior shifts, and technological advancements, many others have not yet effectively utilized these capabilities for basic measurement requirements. This target management landscape indicates an industry where measurement excellence may become a source of competitive advantage and stakeholder confidence, while measurement gaps may limit credibility and strategic options.

The rapidly evolving climate landscape requires dynamic target management. Organizations must balance accountability for historical commitments with responsiveness to new scientific insights, regulatory requirements, and technological developments through regular science-based target reviews that assess continued alignment with climate science and sectoral decarbonization pathways. Organizations that embrace regular target review and enhancement demonstrate comprehensive climate management while positioning themselves advantageously for emerging requirements and opportunities. Target updates that enhance ambition while maintaining accountability further demonstrate organizational learning and commitment evolution; an approach that increases stakeholder confidence in management capability and strategic vision.

Best practices in target recalibration require integration of new methodologies and standards. This integrated framework allows for the continuous improvement of climate measurement and management capabilities while balancing stability for long-term accountability with the adoption of improved measurement approaches. Leading practice frameworks incorporate several key elements:

- Alignment of company targets with broader industry decarbonization pathways to ensure that organizational goals meaningfully contribute to economy-wide climate objectives
- Adoption of a proactive approach by voluntarily enhancing targets ahead of regulations requirements, positioning an insurer ahead of mandatory compliance
- Transparency in communications explaining the dynamics of why targets evolve while preserving accountability for past commitments



Closing the Measurement Gap in an Era of Climate Acceleration

The insurance industry stands at a critical inflection point. While demonstrating strong capabilities in climate governance, strategy, and risk management, the persistent 29% plateau in metrics and targets performance represents more than a compliance gap—it reflects a fundamental disconnect between climate understanding and operational accountability that undermines the sector's ability to navigate an accelerating climate transition.

The "Great Measurement Gap" documented in this analysis reveals both the magnitude of the challenge and the scale of the opportunity. With none of the analyzed carriers providing absolute emissions targets despite 87% establishing comprehensive climate commitments, the industry has created a measurement vacuum that limits strategic decision-making, stakeholder confidence, and climate adaptation and resilience at precisely the moment when these capabilities are most essential. The record-breaking $135 billion in climate losses during 2024, followed by the unprecedented $250 billion economic impact of the 2025 Los Angeles wildfires, underscore that climate measurement is no longer an optional enhancement to business strategy; it is a fundamental requirement for operational survival and competitive positioning.

Yet this analysis also reveals the pathways to transformation. The emergence of metric and target leaders achieving comprehensive target setting, progress tracking, and analytical capabilities demonstrates that reporting comprehensiveness is both technically feasible and competitively advantageous. These organizations are developing the foundational capabilities that will prove essential as climate impacts intensify, regulatory requirements evolve, and investor expectations for accountability continue to expand.

The Imperative for Action

The insurance sector's metrics and targets challenges require coordinated action across multiple stakeholders:

- **For insurance companies:** The competitive advantages available to measurement leaders, including improved investor and customer confidence, superior strategic decision-making capabilities, and market differentiation create a compelling business case for immediate investment in building metric and target capabilities. Organizations that continue to delay

comprehensive metric and target development risk being unprepared for the climate and regulatory realities that are rapidly emerging.

- **For regulators:** The systematic gaps in industry measurement capabilities highlighted in this analysis suggest opportunities for enhanced guidance, standardization efforts, and capacity-building initiatives that could accelerate sector-wide improvement while maintaining competitive dynamics that reward excellence.
- **For investors and stakeholders:** The clear performance distribution identified provides a framework for incorporating climate measurement capabilities into investment decisions, rating methodologies, and stakeholder engagement strategies that can drive market-based incentives for improvement.

The Path Forward

The technical feasibility of comprehensive metrics and targets has been demonstrated by leading U.S. insurers, indicating that sector-wide transformation is achievable with appropriate commitment and investment. The analytical capabilities revealed through the relatively more robust adoption of scenario analysis suggest that many carriers possess the technical foundations required for metric and target excellence but have not yet deployed these capabilities comprehensively across their climate management systems; a gap that reflects not just implementation choices but also the significant costs and time horizon mismatches between annual pricing cycles and long-term climate planning.

The insurance industry's role as a critical enabler of economic activity, through both its underwriting and investment functions, means that metric and target excellence within this sector can drive climate progress far beyond individual company boundaries. As insurers develop sophisticated capabilities for measuring and managing financed and facilitated emissions, they become powerful agents of economy-wide decarbonization through capital allocation decisions, underwriting standards, and stakeholder engagement that influence climate outcomes across all economic sectors.

Addressing the "great measurement gap" does not require insurers to implement comprehensive measurement systems simultaneously across all emission scopes and target categories. Rather than overwhelming organizational capacity with immediate full-scale disclosure requirements, a structured three-phase implementation approach enables progressive capability development while demonstrating measurable advancement toward comprehensive climate accountability:

Step 1 — Foundation (0–1 year)

- Disclose absolute scope 1 and 2 emissions. Pilot underwriting and financed emissions (Scope 3 Cat 15, PCAF or comparable methodology)
- Report an interim attribution factor and data quality score
- Engage key stakeholders in data collection and disclosure

Step 2 — Expansion (1–3 years)

- Extend underwriting emissions coverage across all major commercial lines

- Report weighted-average carbon intensity per line of business and assess data quality improvements using PCAF's multi-option scoring (Options 1–3) or other comparable methodology
- Set interim emissions intensity targets and publish forward-looking Expected Emissions Reductions

Step 3 — Strategic Integration (by 2030)

- Integrate underwriting emissions into enterprise risk dashboards and capital decisions. Align emissions reduction targets with Net Zero Insurance Alliance (NZIA) protocols and SBTi guidance
- Publish and report progress related to the transition plan (if any)[5]

A Sector Ready for Transformation

Ceres' analysis reveals an industry with the technical capabilities, stakeholder pressure, and business incentives needed for rapid improvement in climate measurement and target setting. The persistence of the measurement gap reflects implementation challenges rather than fundamental barriers, suggesting that focused attention and strategic investment can drive substantial progress in the near term.

The insurance sector's unique position at the intersection of climate risk and economic enablement creates both opportunity and the responsibility to lead climate metric and target comprehensiveness that serves as a model for climate accountability across the financial services sector. The insurers that embrace this opportunity will be best positioned to thrive in a climate-constrained economy while contributing to the systemic transformation required for climate resilience. The measurement crisis is not permanent. With the roadmap provided by leading insurers and the business imperative created by accelerating climate impacts, the insurance industry can close the metrics and targets gap and unlock the strategic capabilities needed for both business success and climate progress in the years ahead.

1 "Absolute emissions" refer to the total quantity of greenhouse gas emissions produced by an organization over a specified period regardless of changes in business activity, revenue, or operational scale. This measurement approach differs from relative emissions (also known as carbon intensity), which express emissions per unit of activity such as emissions per dollar of revenue, per square foot of office space, or per policy written.

2 "Fully compliant" here refers to organizations that comprehensively address all three TCFD Metrics and Targets recommendations: disclosure of climate-related metrics, greenhouse gas emissions across all relevant scopes, and targets with performance tracking.

3 **Scope 1 emissions** are direct emissions from sources owned or controlled by the insurer, such as fuel combustion in company vehicles, backup generators, and on-site heating systems. **Scope 2 emissions** are indirect emissions from purchased electricity, steam, heating, and cooling used in the insurer's offices, data centers, and branch locations. **Scope 3 emissions** represent all other indirect emissions across the value chain and are typically the largest category for insurers as they include emissions from investment portfolios (financed emissions), underwriting activities, and downstream impacts from insurance products that enable high-carbon activities.

4 Green tariff programs are voluntary utility programs in regulated electricity markets. These allow large commercial and industrial customers to purchase up to 100% renewable electricity directly from specific renewable energy projects through special utility tariff rates approved by state utility commissions.

5 In November 2024, the United Nations-convened Forum for Insurance Transition to Net Zero (FIT) launched the first-ever global guidance on transition plans specifically designed for insurance companies and articulating triple role as risk managers, risk carriers, and investors in supporting a just transition to a net-zero economy. In July 2025, FIT launched a supplemental Guide for insurance and reinsurance underwriting portfolios on transition plans.