World Report Series Property & Casualty Insurance



WALKING THE TALK

HOW INSURERS CAN LEAD CLIMATE CHANGE RESILIENCY



CONTENTS

Foreword	3
Executive steering committee	4
Executive summary	5
Climate change and its risks are on everyone's radar	6
Fundamental business model changes are required	9
Embed climate resiliency in corporate strategy	19
In conclusion	22
Methodology	23
Partner with Capgemini	24

FOREWORD

It feels somewhat ironic to launch our inaugural World Property & Casualty Insurance Report *Walking the talk: how insurers can lead climate change resiliency*, during a year when eastern Antarctica recorded temperatures 40°C (70°F) above average for more than three days.

The mid-March event has essentially rewritten Antarctic climatology, said researcher Stefano Di Battista via a cautionary Twitter message. Such temperature anomalies would have been considered "impossible" and "unthinkable" before now, he added. Likewise, Jonathan Wille, a polar meteorology researcher at Université Grenoble Alpes in France, told *The Washington Post* that the mid-March Antarctica event might not offer a snapshot of the current state of global warming. Still, climate change is "loading the dice" for more to come.

Incidents such as this illustrate the implications of climate change and foreshadow its impact on the insurance industry. Insured natural catastrophe losses have increased 250% within the past 30 years. Climate change has upended traditional coverage, underwriting, and investments dynamics as today's policyholders seek protection and peace of mind. Insurers that deliver both will position themselves to generate deeper customer trust and offer personalized solutions tailored to individual policyholder preferences and expectations.

More than half of the 270 insurance executives we polled said they were implementing at least one initiative to help policyholders become climate-resilient. Similarly, 84% of the nearly 5,000 participants in our 2022 Voice of the Customer survey said they are keenly aware of climate influences, are changing their behaviors, and have taken sustainable actions over the last 12 months.

Unfortunately, our analysis suggests that only 8% of insurers are climate change frontrunners. Based on their advanced data analysis capabilities, risk-prevention focus, and sustainability-promoting underwriting and investments, this future-focused minority makes up our *Resilience Champions*.

Capgemini has created a climate resiliency framework to enable insurers to build climate resilience capabilities within a changing risk landscape, while capitalizing on opportunities beyond risk transfer. Our report offers a roadmap to incorporate new data sources and leverage advanced technologies to build better risk models.

We realize insurers can't do it alone, thus the need to leverage sustainability ecosystems based on collaboration among public-private partners, communities, ClimateTechs, and climate experts. So, now, more than ever, we urge insurance firms to align across the C-suite and shift from being early adopters to becoming drivers of innovative and sweeping change.

Today, when no region around the globe is immune from climate-change-related catastrophes, near-term corrective actions are crucial. Therefore, we invite you to call upon our international team of subject matter experts to begin your climate resiliency journey and evolve your risk-mitigation product propositions.

Anirban Bose

Financial Services Strategic Business Unit CEO & Group Executive Board Member, Capgemini

John Berry CEO, Efma

EXECUTIVE STEERING COMMITTEE

The Executive Steering Committee for our inaugural World Property & Casualty Insurance Report included CEOs, CMOs, sustainability decision-makers, InsurTech leaders, industry influencers, and technology partners. They helped steer our report content through ideation, hypotheses refinement, validation of key findings, and sharing of best practices. Participants represent the Americas, EMEA, and APAC to ensure a mix of global perspectives and experiences.

NORTH AMERICA



Kimberly Palatnick
VP, Strategy & Sustainability
Wawanesa



Nigel WalshManaging Director, Insurance
Google



Nick Allain Head of Marketing Zesty, Al



Joe Paluska CMO One Concern

EUROPE



Hans De Cuyper CEO AGEAS Group



Hanno Mijer Global Head Zurich Resilience Solutions, Zurich



François LanavèreHead of Business Development
AXA Climate



Founder
Embedded Finance &
Super App Strategies

APAC



Dipak Sahoo Regional CIO, Asia Generali



Kate LyonsGroup Head of Sustainability

QBE

EXECUTIVE SUMMARY

Climate change and its substantial risks are on everyone's radar

Climate change is significantly affecting people and businesses. Not surprisingly, it is a top concern for policyholders and insurers – worldwide. However, for proactive insurers, climate change can also provide an opportunity to enable purpose through actions by actively building climate-resilient business models and propositions.

- Over the past three decades, economic loss driven by climate change increased by 270%
- Policyholders are conscious of climate change, and around three-quarters of them rank it among their top concerns.
- Insurers are in tune with customers. About 40% rank climate change as a top priority, with profitability and insurability emerging as leading climate-related issues
- While most insurers acknowledge climate change impact, many have yet to develop a climate resiliency strategy

Fundamental business model changes are required

Future-focused insurers will embed climate strategies into their operating and business models. But, that requires fundamental changes such as revisiting data strategy, focusing on risk prevention, and moving beyond exclusions in underwriting and investments. To achieve this, insurers need to build a resilience ecosystem by collaborating with government, communities, and ClimateTech specialists to achieve success.

- Our analysis suggests that a select few insurers (8%) are on course to achieve climate resiliency. We call these insurance frontrunners Resilience Champions.
- Climate resilience requires a sophisticated data strategy. Yet, only 35% of insurers have adopted advanced data analysis tools such as machine-learning-based pricing and risk models. These tools are critical to unlocking new data potential and enabling more accurate risk assessments.

- Risk prevention based on data and behavioral science is at the top of the agenda for future-focused insurers. More than 65% of customers are interested in climate risk prevention and mitigation services, and 53% will pay for them.
- More than 30% of insurers restrict investment in unsustainable companies, and >20% restrict coverage to unsustainable companies. Insurers that move beyond exclusions and divestment and actively engage in risk prevention position will themselves to support the transition to a climateresilient economy.

Insurers must embed climate resiliency into business strategy

Three key actions can fuel insurers' climate resiliency journey while boosting their relevance and profitability and contributing more meaningfully to one of the most significant modern-day challenges.

Revisit your corporate strategy.

Articulate climate resilience as a structured part of the corporate strategy to assure shareholders of the value-creation potential for all parties involved. Well-defined actions assigned to individual C-level executives will ensure clear ownership.

Rework innovation.

Encourage it to bridge the gap between longterm ambitions and short-term planning horizons and engage with resilience ecosystem partners to access new capabilities.

Redesign your technology strategy.

Deploy IoT, cloud, artificial intelligence, machine learning, and quantum computing to enable insurers' path forward by improving risk management, innovating products, transforming claims, and elevating customer experience.

Climate change and its risks are on everyone's radar

Today, no global region is safe from climate change. For example, storms in the United States drove losses of more than USD60 billion in 2021. Floods in Germany caused insured losses of >USD9 billion. Meanwhile, China's insured losses hit nearly USD2 billion, and wildfires in Australia caused insured losses of USD63 million.¹

As part of the 2015 Paris Agreement, 196 countries agreed to limit global warming to well below 2°C (35.1.6°F) compared with preindustrial levels.²

Now, however, 2.4°C (36.3°F) warming is expected by 2100.³ And that means that by 2050:

- 410-million coastline dwellers will be at risk.4
- Global economic output may shrink 11% to 14% compared with GDP without climate change, according to a Swiss Re report.⁵
- Annual investments of USD3 to 6 trillion will be necessary to achieve net-zero emissions. 6

"As natural catastrophe events become more frequent, the need for adequate insurance protection escalates. Therefore, non-insurance is not an option."

Dr. Jörg Hipp

Head of Commercial Business Transformation, Allianz SE, Germany

Changing weather patterns increase economic losses

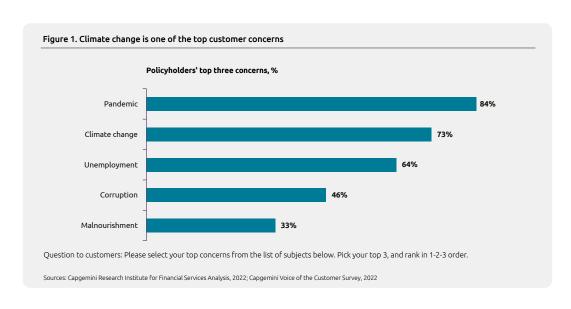
The insurance industry is paying a steep price as climate change accelerates. Natural catastrophe events have led to a 3.6 times increase in insured losses and a 2.5 times increase in non-insured losses over the last 30 years.⁷

Losses are rising, and insured losses for secondary perils – such as wildfires and storms – have nearly doubled within the past decade.8 The shift is significant as secondary threats accelerate faster than primary perils, such as earthquakes and tropical cyclones. In addition, risks are moving from wind to water-related threats. In the 1980s and 1990s, Natural Catastrophes (Nat Cat) events were split between wind and water, each accounting for 30-35% of total events. Today, water-related perils cause around 45% of Nat Cat events.9

Don't look up – climate change is fundamentally altering policyholder behavior

We captured the sentiments of around 5,000 customers across the globe, and climate change emerged as policyholders' second-highest concern, behind COVID-19 (Figure 1).

Customers who realize the gravity of the situation are acting. More than 80% of



individual and commercial clients have taken at least one sustainable action over the last 12 months – including activities as small as walking versus driving and as significant as investing in resilient structural infrastructure. Climate change has upended traditional coverage dynamics and today's policyholders

overheads (Figure 2). Three climate-change issues concern insu-

threats. Regarding climate change executives

are particularly worried about insurability

issues, pressure on profitability and regulatory

- Insurability Shifting risk reduces the addressable market in various regions.10
- Profitability Mounting losses worsen loss ratio and weaken insurers' capital position.11
- Regulation Demand for disclosure rises and regulators worldwide assess the sector's exposure to climate risk and prescribe scenario analysis.

These concerns have sparked the longest hard market on record, with 17 quarterly composite insurance rate increases. 12 Unfortunately, these challenges are not hypothetical and have become a stark reality in many markets.

For example, California has withstood several record wildfires recently, including 7,860 fires in 2019, leading to a 31% hike in non-renewals by policyholders.¹³ In turn, state regulators capped premium prices and required insurers not to cancel any home insurance policy for 12 months.14 The result? Several leading insurers pulled out of the California home insurance market.15

The situation in California is but one example of why insurers need sustainable and resilient business models to tackle the shifting risk environment. Insurers must consider ways to limit losses while simultaneously helping to boost policyholder resiliency. The industry's long-term relevance relies on a win-win commitment and action plan.

From Germany, Dr. Olaf Frank, Head of Business Technology at Munich Re, said, "Insurability issues in certain high-risk areas stem from the lack

"The insurance industry has the greatest opportunity and most unique and influential position to directly impact how climate change will affect customers over the next five years and every generation after that. It is a gamechanging opportunity when we are already in the second half. Our time and

Nigel Walsh

Managing Director, Insurance, Google, UK

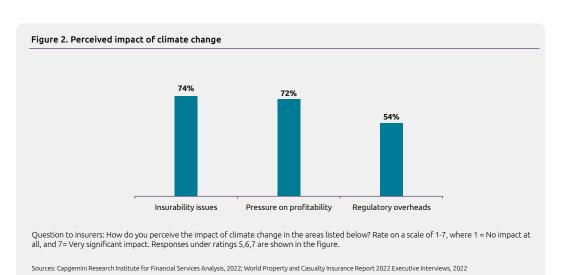
responsibility to act are now."

seek protection and peace of mind more than ever. By providing both, Insurers have a unique opportunity to generate deeper customer intimacy and loyalty, thus improving profitability.

Climate change is a top concern for insurers

As customers grapple with anxiety over potential Nat Cat events, insurers are losing sleep, too.

Climate change is a top risk for insurers, with 44% of executive rating it as comparable to cyber, closely followed by financial and tech



of data to understand and calculate risks, which ultimately impedes insurers from offering coverage pricing that aligns with the global market".

Insurers acknowledge climate change impact, but are they walking the talk?

Climate risk presents a unique opportunity for insurers to live up to their purpose through action. In fact, it will enable considerable growth of the Property and Casualty risk pool. Studies predict that Property & Casualty global premiums will rise by USD2.5 trillion over the next 20 years to reach USD4.3 trillion by 2040, and climate change will drive 30% to 40% of this increase. Insurers that capture a meaningful portion of this growth can create a positive flywheel momentum for all stakeholders, from employees to customers, while generating significant shareholders returns.

Going back to 2015, we analyzed what insurers have said and done to tackle this opportunity and challenge. They consistently acknowledged the challenge. In recent annual reports from the 35 largest market-cap insurers, we found that mentions of sustainability terms had increased fourfold (Figure 3). In addition, more than three-quarters of firms had designated a chief sustainability officer or equivalent to beef up governance around sustainability issues.

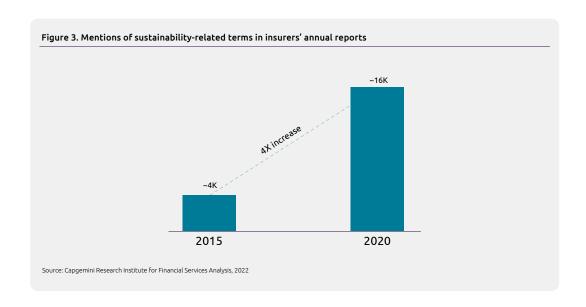
Are these market leaders walking the talk? Only 43% have announced a net-zero emissions target, and some don't have a clear mandate or tangible goals.

To truly lead the climate resiliency journey, all insurers must revisit their propositions and balance risk prevention with risk management.

In addition, CEOs will be required to champion and orchestrate the evolution of operating and business models enabled by C-suite leaders who will take on shared and specific responsibilities.

In Switzerland, Hanno Mijer, Zurich's Global Head of Resilience Solutions, says, "It's too simple if insurers start to exclude highly exposed risks. The industry needs to engage with clients to understand their pathway to achieve more resilience and how they will manage their transition." He adds that "progress monitoring based on data will be key."





Business model changes are needed to achieve climate resiliency

Climate change is the impetus that will transform every company and industry. But to navigate through the crisis, resiliency must be embedded within insurers' DNA to enable fundamental changes to business and operating models.

What will the journey look like?

Transforming the business and operating models will include revisiting insurers' data strategy, focusing on risk prevention, and adopting a sustainable underwriting and investment policy.

Capgemini has created a climate resiliency framework to help insurers build the required capabilities within a changing risk landscape while capitalizing on opportunities beyond risk transfer (Figure 4).

The first step in our framework requires a profound rethinking of current risk assessment models and associated data strategy. More granular data and insights can enrich risk assessment capabilities so insurers can improve customer outcomes with behavioral nudges that encourage policyholder peace of mind and risk prevention action.

Another critical aspect of our framework is sustainable investment strategies and underwriting practices that drive long-term benefits essential for insurers to encourage resilience among clients and stakeholders.

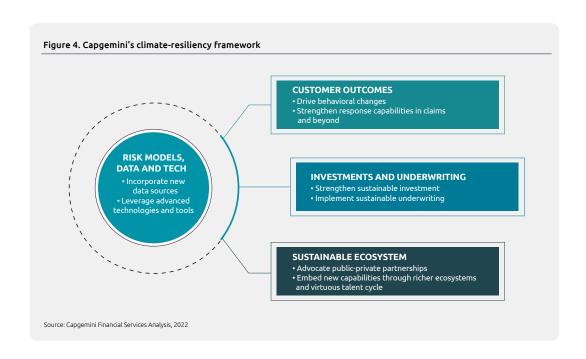
Successful transformations in data strategy, risk prevention, investment, and underwriting strategies can only be achieved by establishing a resilience ecosystem – by advocating public/private alliances and collaborating with innovative third parties, including ClimateTech firms and local communities.

Resilience Champions as trailblazers

To understand carriers' maturity in the journey towards climate resiliency, we interviewed 270 insurance executives worldwide. Our conversations revealed that only 8% were on the fast track (Figure 5). We call these future-focused insurers Resilience Champions. For many other players, the opportunity is to be fast followers and turning their commitments into actions.

80%

of Resilience Champion firms have a chief sustainability officer or equivalent





Resilience Champions unlock data value for risk assessment

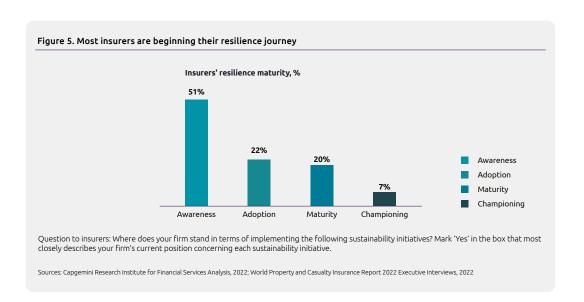
The first step to strengthening climate resilience capabilities requires the Chief Data Officer to explore how to access data sources that provide accurate, granular, and real-time risk information.

Here Resilience Champions are ahead of the pack, with around 53% accessing more than six new data sources, including satellite data, remote sensors, weather stations, geo-data, social media data, ESG models, and water levels (Figure 6).

Chief Actuaries and Chief Risk Officers must then work closely with Chief Technology Officers to leverage advanced tools and technologies to optimize the potential of data. François Lanavère, Head of Sales and Business Development, AXA Climate, France said "The value is not the data itself. It is in what you do with it – how you explain it and transform it into actionable insights."

While the industry has taken significant steps in accessing new data sources, the opportunity to secure deeper insights from the data is not fully leveraged. However, Resilience Champions are leading the way here, too, with nearly 60% of them in advanced stages of deploying Machine Learning-based pricing models, advanced scenario analysis, and stochastic modeling.

For example, Sompo International Holdings, a global specialty provider of property and casualty insurance, partnered with Los Angelesbased Praedicat to use the analytics company's emergent risk framework, probabilistic liability



catastrophe model, and a new litigation tracking capability to help manage Sompo's global casualty portfolio.¹⁷

"We have unprecedented access to data to micro-segment customers and model certain weather and climate risks around their unique portfolio and assets," says Jayme Hart, an insurance data and analytics solutions leader at Amazon Web Services, USA. "As a result, a carrier's risk-model accuracy can dramatically improve."

Risk prevention. The new mantra for better customer outcomes

Insurers can leverage more granular insights to develop new risk-prevention solutions, not solely to reduce losses. For example, Canada-based Kimberly Palatnick, VP Strategy & Sustainability, Wawanesa Mutual Insurance Company highlighted that "at Wawanesa, we're here to look after one another. Part of that is considering how, as an insurance company, we

can help build resilient communities. There is tremendous value in helping people understand the risks they face, and in encouraging preventative and sustainable behaviours."

An enormous opportunity exists for firms to innovate new risk-prevention offerings to create additional revenue streams (with individual income statements) while creating a bonafide method to satisfy policyholders. Brussels-based Hans De Cuypher, the CEO of AGEAS Group, agrees that "the big opportunity around risk prevention is for firms to evolve prevention into a fee-based business adjacent to their traditional insurance business to drive resilience and diversify revenues."

With natural disasters dominating the news, policyholders say risk prevention has become a priority. More than 65% of customers say they are interested in climate risk prevention and mitigation services. Not only they are interested, 53% also indicated they are willing to pay for risk prevention services, a significant jump from 15% in our 2019 survey.

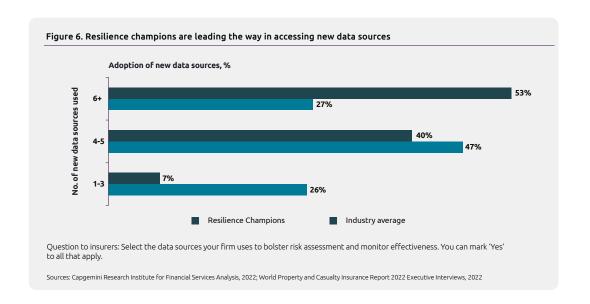
60%

of Resilience Champions are in advanced stages of deploying Machine Learning-based pricing models, advanced scenario analysis, and stochastic modeling.

Product teams must consider how their climate-change solutions will be accepted and adopted by consumers. It's not only marketing's job to engage with people about climate. Insurers must embed consumer insights into product designs.

Nick Allain

Head of Marketing, Zesty.AI, USA



The time has come for forward-looking actuaries to work closely with product and marketing to accelerate the development of innovative climate resiliency risk prevention and risk-transfer solutions.

Sure, policyholders say they are interested in risk prevention solutions. But successful adoption requires active intervention from insurers to steer individuals and organizations to action. Let's call it a gentle behavioral nudge.²⁰

Insurers can deploy behavioral nudges to promote win-win propositions to policyholders. As Guidewire's Chief Customer Officer, Christina

Colby, says, "The big opportunity is encouraging policyholder behaviors that promote climate resiliency rather than just addressing what happens when losses occur."

If policyholders agree to implement resiliency actions, their assets retain value, and the insurer's financial results improve. The concept applies to individual and commercial lines. So, how can insurers implement a behavioral nudge effectively?

UK insurer leverages commercial data for risk and sustainability insights

With offices throughout Britain – Zurich UK employs ~5,000 insurance professionals. The firm offers general- and life insurance products to retail and commercial clients. **Business challenge:** Zurich UK executives wanted to help clients understand, detect, and prevent or mitigate commercial property loss events while supporting sustainability efforts. However, when dozens or more structures are involved. carbon footprint reduction can be daunting, particularly as UK regulators strictly enforce efficiency mandates. In addition, today's commercial clients want to run buildings and equipment effectively and transition from costly, wasteful, and harmful practices.18 **Strategy/implementation:** When the insurer learned that a significant amount of data collected while managing a commercial property is under-utilized, it collaborated with GWTInsight (a UK InsurTech/PropTech firm specializing in commercial building performance). The partnership enabled Zurich UK to extract property data, analyze it and present it to policyholders in an

actionable format. Through GWTInsight's efficiency expertise and Zurich's risk knowledge, policyholders benefitted from a 60-day structural health-check report and real-time activity dashboard. The health check suggests ways for clients to gain sustainable savings and reduce risk. The live dashboard allows users to set notification alerts when specific data points hit set thresholds.

Results: Zurich UK's unique collaborative solution empowers risk managers, underwriters, and claims handlers to identify commercial property risks in real-time, allowing insights and decisions to mitigate or remove threats before they become loss events. It addresses risk and sustainability by gathering consistent feedback to identify improvement areas. Policyholders can install the solution independently, and Zurich UK predicts that most clients will generate device ROI within two months. The insurer is poised to develop additional service-based propositions to augment its existing coverage and risk-engineering offerings.¹⁹

Follow the SMART approach

The nudge should be Social, appealing to people's tendency to socially conform. Begin by benchmarking prevention solution adoption among policyholder peers, such as utility companies that compare neighbors' water or power usage.

Effective nudges are Measurable. Insurers can quantify the impact of the prevention solutions to appeal to customers considering the costs of potential losses.

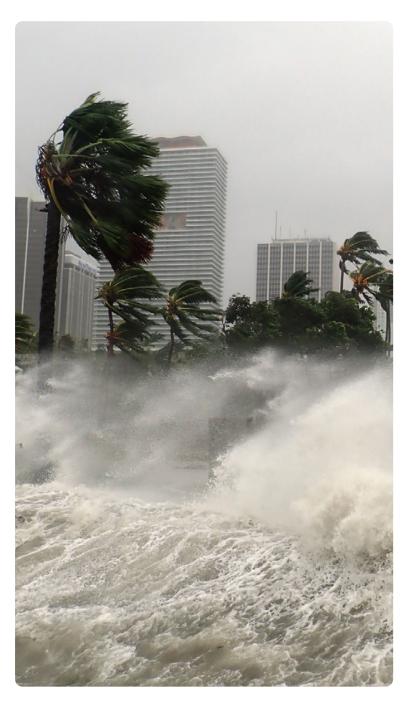
Additionally, nudges should be Actionable and Relevant, thus offering personalized solutions tailored to individual preferences and expectations. For example, while nearly half of policyholders say they want discounts, others seek benefits in kind, such as risk prevention recommendations.

Finally, effective nudges offer Timely advice and early warnings through select channels.

Successful behavioral nudges require upto-date, relevant customer data and insights to create compelling messages delivered through the right channel. Firms can mine high-impact data and insights through digital solutions and platforms that seamlessly integrate within policyholders' day-to-day activities, possibly through embedded solutions in adjacent ecosystems.

Insurers have the tools to embark on this complex risk prevention and mitigation journey. However, success depends on strengthening customer trust and venturing beyond traditional risk-transfer propositions by acquiring talent who can deeply engage with policyholders through behavioral nudges based on data and insights.

"In the sustainability journey, organizations need the right talent with radically different skill sets," said Kate Lyons, who leads QBE Australia's sustainability efforts. "Success stories happen where you deploy diverse, multidisciplinary people and different ideas to problem-solve and boost client engagement."



"These initiatives will help us move beyond the traditional claims model. Let's invest in automated claims creation and adjudication and distribute work that can't be straight through processed to the right people at the right time while minimizing fraud."

Resilient response capabilities spark superior customer experience

While prevention initiatives aim to reduce the frequency and severity of losses, loss incidents will continue to happen. Unfortunately, our customer survey participants said claims processes are sub-optimal and lengthy, payouts and forms are complicated, and policies are not comprehensive.

In tune with customer sentiments, some Insurers are now implementing new initiatives, including aerial photography, satellite imagery, and drones, and combining them with fast and scalable operations to rapidly mobilize resources and support policyholders in the most critical need.

However, the most significant opportunity for Chief Claims Officers is to rethink their claims strategy guided by three principles aimed at providing a faster, better, and more personalized response during a loss event:

- **Prevent future loss events**. After a loss, restore affected structures at a safer location versus rebuilding on the same site.
- Boost insured-property resilience. Build floodwalls around homes that follow the latest building association guidelines (ideally influenced by insurers).
- Adopt environmentally-friendly restoration practices. Maximize waste and debris recycling and use a sustainable supply chain.

Digital solutions slash the time to process storm-flooded total-loss vehicles

US-based **CURE Auto insurance** has provided affordable car insurance to over a million drivers in New Jersey and Pennsylvania for 30+ years. With its launch into Michigan (July 2021), the insurer is growing based on a unique approach to underwriting that prioritizes driving history over credit history.

Business Challenge: CURE was looking to improve and streamline the total loss experience and sought a modern, integrated solution to eliminate manual paperwork, facilitate quicker title/lien releases, and speed claims resolution for policyholders while increasing transparency across the process.

Strategy/Implementation: With a focus on customer-centricity, CURE leveraged CCC Intelligent Solutions' Total Loss Care, a comprehensive digital solution that simplifies and improves total-loss claims processing. Total Loss Care's end-to-end experience helped CURE automate the

manual, time-intensive tasks of obtaining lien information and processing title documents. It also provided a mobile app to offer policyholders a digital guide throughout their total loss experience that reduced form submission time. Through automation and direct, digital connections to auto lenders, CURE accelerated its ability to secure titles and pay off liens for vehicles deemed a total loss. The insurer slashed claim resolution time from an average of 45 days to 25.

Results: The technology was a game-changer for CURE and its policyholders during Hurricane Ida (September 2021) as vehicles became submerged in stormwater and total loss claims volumes across New Jersey jumped 35%. However, enabled by Total Loss Care support, CURE could offer 40% shorter processing times, and customer satisfaction rose 50%.

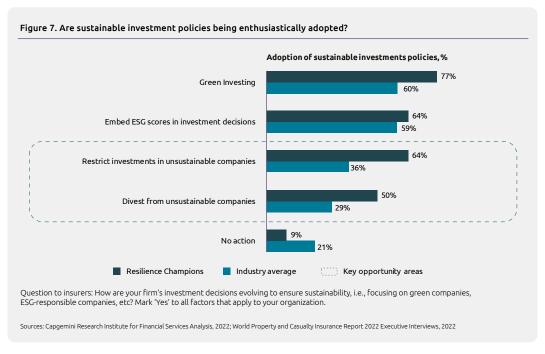
Insurers should look beyond investment and underwriting criteria

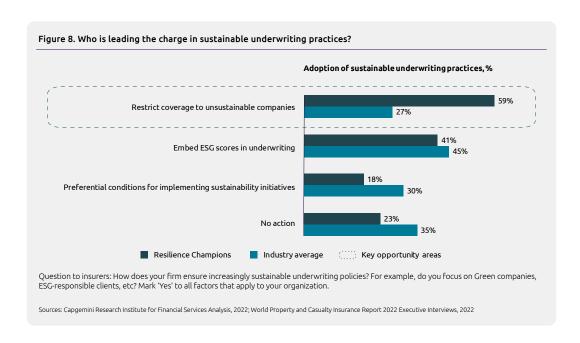
The third key pillar in Capgemini's climate resiliency framework requires Chief Underwriters and Chief Investment Officers to take bold actions and adopt sustainable best practices at scale. From our survey, we learned that 21% of firms had not taken action yet on sustainable investments, and 35% of firms had not taken action on sustainable underwriting. In contrast, more than three-quarters of Resilience Champions had adopted one or more initiatives in both aspects (Figures 7 and 8)

However, there is also considerable interest – particularly among Resilience Champions – in restricting investments and coverage of unsustainable companies that adversely impact the environment. Unfortunately, the definition of unsustainable is subjective, and various organizations define which companies and assets fall in this category through different criteria.

We believe insurers will win by taking a more active role and moving beyond exclusions and divestment. Firms can engage with customers and businesses by leveraging their risk management expertise. Then, they can suggest action plans built around risk-prevention initiatives and mitigation to support (versus exclude) policyholders and companies during the transition. Not only will insurers play a more substantial role in enabling societal resilience, but they will also reduce the potential for reputational risk by taking an active pro-climate resilience stance.







Insurers need a sustainable ecosystem

For successful transformations in data strategy, risk prevention, investment, and underwriting, Chief Innovation Officers will create a collaborative, resilience ecosystem by coordinating with C-suite colleagues to identify appropriate qualifications, targets, and objectives to move beyond the traditional ecosystem (Figure 9).

Layer 1 strengthens the core insurance ecosystem. The transition to resilience and risk prevention requires a significant shift in current operations, vision alignment, and new processes to streamline information exchange between brokers, insurers, and reinsurers.

Moreover, insurers will require specially-trained talent to support an efficient resiliency journey. So we were not surprised that half of the Resilience Champions say they nurture sustainability talent. Astute recruitment ensures value alignment with employees and enables the industry to position itself as a prime destination for tomorrow's evolving workforce.

Layer 2 empowers a digital ecosystem through partnerships with BigTech, InsurTech firms, and tech providers to capture new data sources, leverage AI and ML, and deploy cloud and edge computing for insights. Digitalization is essential to increase risk model accuracy and enable risk prevention.

For example, German multinational insurer Munich Re partnered with Microsoft Azure to deploy climate change risk assessments that predict the future.²² Similarly, Aon partnered with US-based Zesty.ai to build an AI-powered wildfire model to assess climate and non-catastrophic risks to detect and mitigate wildfires.²³

Layer 3 is an essential addition to this model, and it focuses on building a resilience ecosystem. It is where insurers leave their comfort zones and expand their ecosystems by partnering with governments, ClimateTech firms, and climate specialists to bolster resilience proficiency.

As insurers begin to think outside the traditional coverage box, they should consider these best practices:

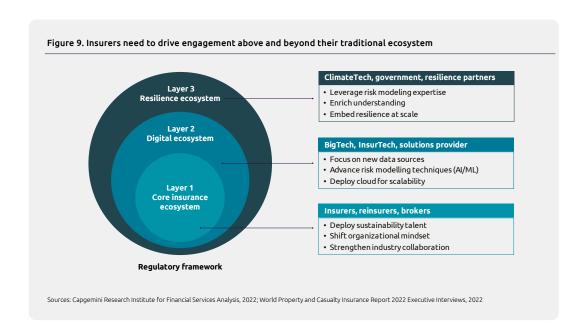
- Advocate for public-private partnerships to create risk-prevention initiatives and tackle tail risk that the industry may not be able to underwrite unilaterally
- Influence construction standards and land planning to ensure developers embed proper risk management and assessment plans before they break ground

28%

of Resilience Champions partner with BigTech and Insurtech

- Insert climate risk in the property purchase process, including showing climate change risk indicators on real estate aggregator websites in the same way as proximity to schools and local amenities is promoted
- Lobby financial institutions to reexamine financing requirements to assess whether coverage is sufficient
- Insist on underwriting right-to-repair clauses to minimize waste and drive sustainability across the value chain

Finally, the industry needs to continue its data-driven dialogue with regulators world-wide to drive consistency and clarity in requirements and initiatives.





"Within current business dynamics, each data-ecosystem partner owns a piece of information. When they seamlessly share the data, they understand the holistic nature of risk and arrive at a comprehensive customer risk profile."

Dipak Sahoo

Regional CIO, Asia, Generali, Hong Kong

Thai farmers benefit from insurer's innovative satellite weather index

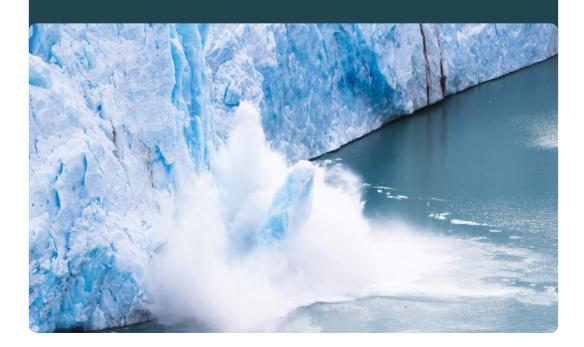
Founded in 1997, Bangkok-based Sompo Insurance (Thailand) Public Company Limited (Sompo Insurance Thailand) specializes in corporate and commercial underwriting for fire, marine, agriculture, motor, travel, and casualty coverage.

Business Challenge: Agriculture is a critical Thai industry, but the effects of climate change make predictable harvests difficult. Longan, a fruit eaten raw or used in soups, desserts, and candies, is a leading Thai export (≈USD 4.9 billion annually). Sompo Insurance Thailand wanted to minimize farmers' losses from weather-related crop damage. However, rainfall varies each season, and the firm sought to create a policy triggered by long-term drought.¹

Solution/Implementation: In cooperation with Thailand's Bank for Agriculture and Agricultural Cooperatives (BAAC), Sompo Thailand piloted a first-of-its-kind coverage plan to protect longan farmers from devastating drought impact using a precipitation volume index. The policy pays indemnity to insured farmers when satellite data indicates low or below-drought index precipitation. Working with the Remote

Sensing Technology Center of Japan (RESTEC), Sompo Insurance Thailand uses a Global Satellite Mapping of Precipitation (GSMaP) solution that provides hourly rainrate data. Damage assessments are possible without in-person surveyors. Through Sompo Insurance Thailand's collaboration with BAAC, the policy was made available for longan farmers in 24 districts in northern Thailand where longans are grown.

Results: The firm introduced longan farmers' coverage under the direction of AgriSompo, Sompo International's integrated platform to assist farmers, ranchers, farm suppliers, agriculture insurers, and agribusinesses in 2019. The launch allowed Sompo Insurance Thailand to hone its expertise in design services for weather index insurance, collect damage data, and relieve farmers of as many losses as possible. By 2021, Sompo Insurance Thailand expanded its parametric weather insurance to cover rice and sugar cane farmers. Today, Sompo Insurance Thailand combines local knowledge with technical support from AgriSompo to further support Thai agriculture.2



Embed climate resiliency in corporate strategy to future-proof business

As breaches in the protective ozone layer multiply, the falling-sky scenario catalyzes the urgency for new business and operating models. We recommend that insurers accelerate their climate resiliency journeys with these strategic mileposts:

- Revisit your near- and long-term corporate strategy
 - Rework your team's approach to innovation
 - Redefine your technology investment goals

Revisit your corporate strategy

The starting point for insurers is to define a resilience plan and embed it in their revisited corporate strategy. The goal is to convert long-term ambitions into short-term actions and carefully estimate the actual ROI of such an investment. To ensure steady progress against this strategy, insurers should consider three steps:

- Complete a detailed gap analysis to identify potential disparities and vulnerabilities within the journey. Is the right talent in place to drive resilience and risk prevention? Are your risk models mature, or could they use fine-tuning? What about the data strategy and technological capabilities required to drive change?
- Engage stakeholders early in the process including governments, communities, and clients, as well as technology partners and InsurTech firms. Align goals, create opportunities to improve awareness and education, and decide whether to buy, build, or partner for new solutions and capabilities development.
- Measure progress to drive a virtuous cycle of change.

California-based Joe Paluska, the CMO from OneConcern, a provider of a Resilience-as-a-Service solution that helps uncover, prepare for, and mitigate unpredictable disaster risk, added: "The industry needs quantifiable, resilient scores that are consistent, transparent, and measurable across assets over time."

Today's extraordinary circumstances position the industry to deliver resilience solutions that

prepare society to face future challenges. "Climate resilience is an incredible opportunity for the industry," said Hanno Mijer, Zurich's Global Head of Resilience Solutions. "Insurers have real skin in the game and can align with customer outcomes. If not insurers, then who?"

Rework your innovation strategy across the value chain

The starting point here is to align across the C-suite. Elevate the role of the Chief Sustainability Officer and encourage a culture and governance structure that enables innovation and bridges the gap between long-term ambition and a planning horizon that rarely extends beyond three years.

"Too often, we trap innovation within short-term cycles," noted UK-based Simon Torrance, Embedded Finance & Super App Strategies founder. "If you think about the amount of innovation needed to tackle climate resilience, you need long-term horizons and collaboration with multiple ecosystem players. Not many insurers have the governance and culture to make it happen."

The ultimate goal of innovation strategy is to embed resilience into the insurance value chain (Figure 10).

Corporate citizenship is an important cornerstone, but the organization also needs clear

"Working together, insurers and governments can create large-scale data exchanges as the basis of predictand-prevent propositions, which are essential to achieve resiliency – both for the industry and society as a whole."

Sean Kevelighan

President and CEO, Insurance Information Institute, USA

value-creation goals. The key is to go beyond excluding assets and support the transition across both underwriting and investments.

Risk management is about capturing and leveraging data better. The goal must be to create new and different approaches for more accurate risk modeling.

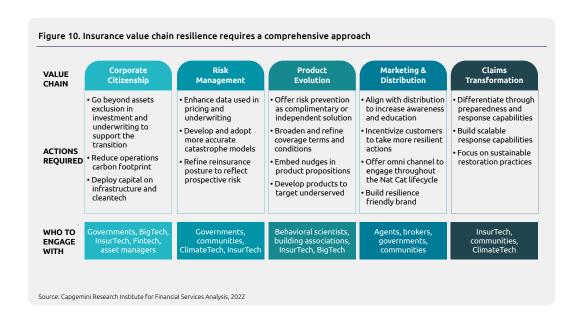
Product evolution offers opportunities to bundle risk prevention with insurance or sell it as a different solution altogether. Insurers that use nudges effectively incentivize policyholders to adopt resilient behaviors and position themselves to offer risk transfer solutions that reduce protection gaps and create growth opportunities.

Generali's Chief Marketing Officer and Head of Sustainability in Portugal, Maria João Silva, said, "We need risk prevention and mutualization literacy to tackle insurability issues and create a win-win proposition for insurers, clients, and governments."

When it comes to marketing and distribution, it is essential to engage customers through all channels to build a resilience-friendly brand.

And finally, claims transformation presents a significant opportunity to create quantifiable differentiation during extreme weather events. Winners will focus on better restoration by leveraging connected sensors and accurate data for loss detection and cloud for scalable response capabilities.

San Jose-based Shivani Govil, Chief Product Officer at CCC Intelligent Solutions, said, "Consumers are used to next-day delivery without thinking about delivery ecosystems, payment processors, or stock houses. Policyholders expect the same, and – as extreme events become more common – insurers need to improve end-to-end customer experience and reduce product complexity."



Redesign your technology strategy

Insurers seeking to boost policyholder resilience need a customer journey featuring bestin-class engagement and optimal outcomes. Start with a digital platform to create a customer journey based on real-time data. Then, provide nudges and timely direct response services via each customer's preferred channel.

Such a platform requires multiple new technologies to coalesce. The most successful insurers will leverage sensors, mobile, and satellite data and drive insights in real-time through AI and machine learning. Deploying these capabilities will require a rapid and structured transition to the cloud to boost computing power.

Leading-edge technologies hold the key to speeding up risk modeling.

For example, quantum computers are on track to deliver quadratic and, in some cases, exponential acceleration, which means computation can be reduced from weeks to hours for significantly complex problems. This capability will benefit insurers seeking to augment their risk-management and risk-prevention capabilities.

Firms that successfully carry out this complex transformation will strengthen their relevance and profitability and authentically contribute to one of the most significant modern-day challenges.

But where does the journey start? Below are key strategies to drive climate resiliency:

- Build a resiliency roadmap and define your strategy
- Access new data via engagement with non-traditional ecosystem partners, capture ESG data, and embed IoT solutions to secure real-time mining.
- Add climate risk insights and implement change detection at renewal. Deploy AI/ML insights and embed data in underwriting and pricing.
- Build infrastructure that enables scalable capabilities. Migrate to the cloud to scale computing power during and after Nat Cat events. Explore quantum computing for faster simulations, and deploy Green IT.
- Evolve your product propositions, including risk prevention and mitigation solutions. Advance



IN CONCLUSION

Climate change is the defining challenge of our times, and customers and insurers are well aware of the risks posed. As a result, some are incrementally taking action.

However, too few insurers are making headway. The whole industry must hit the climate-resilience accelerator and get moving. Start by focusing on critical success levers. Prioritize strategic initiatives aimed at loss prevention. Invest in advanced technologies to assess risks accurately. And establish a diverse and innovative resilence ecosystem.

Deliberation time has expired. Act now to profitably make a difference!

Methodology

The World Property and Casualty Insurance Report 2022 draws its data from two primary sources – the 2022 Global Insurance Voice of the Customer Survey and the 2022 Global Insurance Executive Interviews. These primary researches together cover insights from 29 markets: Australia, Austria, Belgium, Brazil, Canada, China, Colombia, Denmark, Egypt, France, Germany, Hong Kong, India, Italy, Japan, Luxembourg, Mexico, the Netherlands, Norway, Portugal, Saudi Arabia, Singapore, South Africa, Spain, Sweden, Switzerland, United Arab Emirates, the United Kingdom, and the United States.

Capgemini Voice of the Customer Survey, 2022

Our comprehensive Voice of the Customer Survey, which was administered in January and February 2022, in collaboration with Phronesis, polled more 4,900 insurance customers in 16 countries. These markets together represent all the three regions – Americas (North America and Latin America), EMEA (Europe, Middle East, and Africa), and Asia-Pacific (including Japan).

World Property and Casualty Insurance Report Executive Interviews, 2022

The report also includes insights from interviews of over 270 senior insurance executives of leading insurance companies across 27 markets. These markets together represent all the three regions – Americas (North America and Latin America), EMEA (Europe, Middle East, and Africa), and Asia-Pacific (including Japan).

Resilience Champions

We calculated each firm's resiliency maturity based on the maturity of adoption of the following sustainability initiatives: Green IT, Embedding ESG in underwriting & investment, Green finance & sustainable underwriting, Embedding ESG & stress-test scenario analysis in ERM, Embedding climate risk data, Carbon footprint tracking & risk mitigation services, Resilient infrastructure, Recruiting knowledgeable talent, and Climate risk advice. We considered 5 levels of adoption: No capability, Piloting / PoC, Business unit level adoption, Organizational adoption in certain geographies, and Group/enterprise level adoption. In our analysis, we found that top 8% of firms (Resilience Champions) also are leading their way in implementing initiatives that can lead them to achieve climate resiliency.

Partner with Capgemini

Let us help align your climate resiliency purpose with actions by supporting your firm's efforts to:

Establish a fundamental esg data mining solution

- Integrate a data vision into your firm's overall sustainability trajectory
- Assess sustainability objectives to determine which ESG data and indicators are most material to your business lines
- Create a purpose-driven ESG data strategy to build a foundation for sustainability transformation
- Build a purpose-aligned ESG data hub to support the innovation of sustainable insurance products – as demand continues to grow
- **Curate ESG data** through external/internal sources to support metrics

Integrate custom esg scores for esg-linked underwriting & pricing

- **Devise a framework** to establish customized ESG scores
- Integrate customized ESG scores into insurance pricing and underwriting platforms
- Create an inventory of ESG-sentiments curated from structured and unstructured data, powered by AI/ML
- Fold ESG characteristics into pricing and underwriting guidelines

Empower ESG data strategy for #sustainableproperty360

- **Identify and measure ESG factors** for commercial and residential property underwriters
- **Track green buildings** with carbon-footprint index scores
- Track businesses with net-zero and renewables
- Metricize the parameters of commercial operations, including diversity and inclusion, employee perception, business model, and more.
- **Consolidate risk indices**, including property, operations, and management.
- Employ a compliance screener.

Drive underwriting excellence with data-powered insights

Underwriting dynamics are increasingly competitive. Insurers are under pressure to quickly make accurate risk assessments and profitable pricing decisions while offering brokers convenience. Emerging risks and climate change challenges demand new, more comprehensive data sources. All this, as the underwriting talent gap widens – the average US underwriter is 44 years old.²⁵ These days, customers expect quick turnarounds, yet it can take up to eight weeks to underwrite a policy.

Capgemini leverages enriched real-time data and automation to embed relevant insights so small/medium commercial insurers can engage with policyholders at the right moments. Datadriven insights enable underwriters to consider long-term resilience while making policy decisions.

Capgemini enables underwriters to:

- Optimize underwriting decisions and pricing, with a 50-70% reduction in kick-outs
- Improve broker experience with integrated digital workflows to reduce quote-to-bind time to 3 to 5 days versus 6 to 8 weeks
- Focus on high-impact risks thanks to increased data availability and insights
- Gain speed to market and agility with frequent and faster rule maintenance



About the authors



Dr. Seth Rachlin

Global Insurance Industry Leader

seth.rachlin@capgemini.com

Dr. Seth Rachlin leads Capgemini's global insurance industry strategy and manages its relationships with the insurance technology ecosystem. Seth has +25 years of experience in innovation at the intersection of insurance and technology.



Shane Cassidy

Insurance Business Unit (BU)

shane.cassidy@capgemini.com

Shane Cassidy is executive vice president and head of Capgemini's Global Insurance Business Unit. Shane has been at the forefront of digital disruption and innovation for two decades, identifying and developing solutions to address market disruptions.



Kiran Boosam

Global Insurance Strategy & Portfolio

kiran.boosam@capgemini.com

Kiran Boosam leads Capgemini's Global Insurance strategy and portfolio. A P&C and life insurance expert, Kiran envisages the industry dynamics and shapes innovative solutions for the Insurance CxOs leveraging the power of the Capgemini Group, external ecosystems, and emerging technology.



Keith Gage

Global Insurance Sector Lead, Capgemini Invent

keith.gage@capgemini.com

Keith has a proven track record of advising clients, building teams and is responsible for delivering business strategies and solutions to insurance customers. He has an extensive experience leading client in areas of growth, technology strategy, and delivery models that translates to large-scale transformational programs spanning strategy through execution.



Elias Ghanem

Global Head of Financial Services Market Intelligence

elias.ghanem@capgemini.com

Elias Ghanem is responsible for Capgemini's global portfolio of FS thought leadership. Elias oversees a team of consultants and analysts who deliver strategic research to address complex issues related to the future of banking and insurance.



Luca Russignan

Insurance Domain Leader, Global FS Market Intelligence

luca.russignan@capgemini.com

Luca Russignan is an insurance expert and has +12 years of experience, shaping insurance business strategy, working closely with C-suite executive and senior business leaders across the UK, the US, Italy, and APAC.

Key contacts

Global

Shane Cassidy

shane.cassidy@capgemini.com

Dr. Seth Rachlin

seth.rachlin@capgemini.com

Ian Campos

ian.campos@capgemini.com

Stanislas de Roys

stanislas.deroys@capgemini.com

Australia

Manoj Khera

manoj.khera@capgemini.com

Susan Beeston

susan.beeston@capgemini.com

Belgium

Jan Verlinden

jan.verlinden@capgemini.com

Sanjay Jhamb

sanjay.jhamb@capgemini.com

France

Thierry Loras

thierry.loras@capgemini.com

Olivier Hoarau

olivier.hoarau@capgemini.com

Germany

Dr. Joachim Rawolle

joachim.rawolle@capgemini.com

Thomas Hillar

thomas.hillar@capgemini.com

India

Kiran Boosam

kiran.boosam@capgemini.com

Pranab Ghosh

pranab.ghosh@capgemini.com

Italy

Michele Inglese

michele.inglese@capgemini.com

Lorenzo Busca

lorenzo.busca@capgemini.com

Japan

Masayuki Imazu

masayuki.imazu@capgemini.com

Shunichi Watanabe

shunichi.watanabe@capgemini.com

LatAM

Roberto Ciccone

roberto.ciccone@capgemini.com

Geovanni Alfonso Millan

geovanni.millan@capgemini.com

Nordics

Stefan Grimfors (Sweden)

stefan.grimfors@capgemini.com

Jarmo Kortelahti (Finland)

jarmo.kortelahti@capgemini.com

Cecilie Vatn (Norway)

cecilie.vatn@capgemini.com

Portugal

Diogo Baptista

diogo.baptista@capgemini.com

Hugo Oliveira

hugo.goncalo-oliveira@capgemini.com

SE Asia

Sivakumar V

sivakumar.vankamaddi@capgemini.com

Tatiana Collins

tatiana.collins@capgemini.com

Spain

Victor Pizarro Sanchez

victor.pizarro@capgemini.com

Javier Sánchez García

jose.sanchez-garcia@capgemini.com

The Netherlands

Jimut Basa

jimut.basa@capgemini.com

Ewout Bouwman

ewout.bouwman@capgemini.com

UK

Wendy Williamson

wendy-laird.williamson@capgemini.com

Max Bocchini

max.bocchini@capgemini.com

USA and Canada

Satish.Weber

satish.weber@capgemini.com

Keith.Gage

Keith.gage@capgemini.com

Acknowledgments

We would like to extend a special thanks to the insurance companies, ecosystem partners, and individuals who participated in our executive interviews and surveys.

The following firms agreed to be publicly named:

(Awaiting few confirmations) a.s.r., Açoreana, Aegon Santander, AG Insurance, Ageas, Ageas Portugal, Agroseguro, Allianz SE, Allianz Technology Australia, Allianz, Compañía de Seguros y Reaseguros, S.A., Amazon Web Services, American Family Insurance, AXA HongKong & Macao, AXA Versicherungen AG Switzerland, AXA XL, Azul Seguros, Baloise Insurance, BanSabadell Seguros Generales, Barmenia Versicherungen, BNP Paribas Cardif Vita, Bradesco Seguros, Brasilseg, CA Seguros, Catholic Church Insurance, CCC, DKV Seguros, Ethias N.V., Fidelidade, Folksam, Foyer, Fremtind Forsikring AS, Generali France, Generali Italia spa, gig-Egypt, Gjensidige Forsikring ASA, Google, Groupama Assicurazioni, Gruppo Helvetia Italia, Guidewire, iA Financial Group, ICBC (Insurance Corporation of British Columbia), If P&C Insurance, Intesa Sanpaolo Assicura, IRB Brasil Re, kWh Analytics, Länsförsäkringar AB, Länsförsäkringar Skåne, Liberty Mutual Reinsurance, LOGO, LV= General Insurance Group, MAIF, Mapfre, Mapfre España, Markel Insurance SE, Mudum Seguros, Multicare, OK! Teleseguros, P&V Group, Peel Mutual Insurance, Pega, Pelayo, Previsico, Progressive Insurance, Promutuel Assurance, Provinzial Versicherung AG, QBE, R+V Versicherung AG, Rakuten General Insurance Co., Ltd., Reale Group, Reask, Santalucia, SegurCaixa Adeslas, Solunion Seguros de Crédito, Sompo Seguros, State Auto Mutual Insurance Company, Storebrand Forsikring AS, Swiss Re, The Auto Club Group/AAA, Tractable, Tranquilidade, Unipol Gruppo, VICTORIA Seguros, Wawanesa Insurance, Zurich, Zurich Brasil Seguros, Zurich Insurance (UK branch), Zurich Portugal, and Zurich Seguros.

We would also like to thank the following teams and individuals for helping to compile this report:

Elias Ghanem, Luca Russignan, and Kumaresan A for their overall leadership for this year's report; Sukanya Sen, Vipul Mehta, Dipesh Jain, Keshava Shetty, Tamara Berry, and Dinesh Dhandapani Dhesigan for researching, compiling, and writing the findings, as well as providing in-depth market analysis.

Our Internal Editorial Committee for steering the report content and validating the findings: Dr. Seth Rachlin, Keith Gage, Kiran Boosam, Kristofer le Sage de Fontenay, Thierry Loras, Shiva Balasubramaniyan, and James Robey

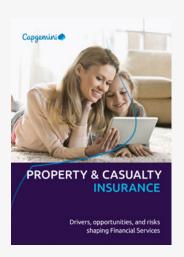
Capgemini's Global Insurance network for providing insights, industry expertise, and overall support for the various initiatives associated with the report: Shane Cassidy, Ian Campos, Christophe Bonnard, Claire Sauvanaud, Ajoy Bhavnani, Amit Gupta, Apoorva Prakash, Aruna Mahesh, Benny Leung, Carlo Dei Cas, Carlos Zavala, Cecilie Vatn , Daniel Rademeyer, Diogo Baptista, Divij Chopra, Eiji Yamada, Geovanni Millan, Gregory Delhomelle, Gustavo Leança, Jan Verlinden, Jerome Buvat, Joachim Rawolle, Jordi Valls Ribas, Kent Ho, Maria Teresa Martin Gimeno, Mario Quaresimale, Martin Baumann, Michele Inglese, Nadine van Son, Nick Udall, Nikolaos Stakoulas, Philipp Roosen, Prashant Shastri, Sean Rowlands, Sivakumar V, Stefan Grimfors, Tej Vakta, and Victor Pizarro Sanchez.

Laura Breslaw, Marion Lecorbeiller, Pranoti Kulkarni, Swathi Raghavarapu, Meg Nair, Jyoti Goyal, Brent Mauch, Sai Bobba, Martine Maître, and and Leena Joshi for their overall marketing leadership for the report; and the Creative Services Team for report production: Sushmitha Kunaparaju, Suresh Chedarada, Balaswamy Lingeshwar, and Sourav Mookherjee.

Hannah Moisand, Sara Rabhi, Boris Plantier, Mirka Tokarova, and the Efma team for their collaborative sponsorship, marketing, and continued support.

Our recent research









The Capgemini Research Institute for Financial Services is an in-house think tank focused on digital, innovation, and technology issues impacting global banks, wealth management firms, and insurers. The Institute annually publishes its signature Financial Services World Reports that draw on voice of the customer surveys, CxO interviews, and partnerships with technology companies as well as academia. These data-driven perspectives explore how financial institutions are meeting emerging business challenges with transformative thinking

enabled by technology and data. The World Retail Banking Report 2021, published by the Institute, was highlighted as one of the top 10 publications amongst consultancy and technology firms by independent analysts.

Subscribe to the Financial Services World Reports

https://www.capgemini.com/world-reports/

About us



Capgemini is a global leader in partnering with companies to transform and manage their business by harnessing the power of technology. The Group is guided everyday by its purpose of unleashing human energy through technology for an inclusive and sustainable future. It is a responsible and diverse organization of over 325,000 team members more than 50 countries. With its strong 55-year heritage and deep industry expertise, Capgemini is trusted by its clients to address the entire breadth of their business needs, from strategy and design to operations, fueled by the fast evolving and innovative world of cloud, data, AI, connectivity, software, digital engineering and platforms. The Group reported in 2021 global revenues of €18 billion.

Visit us at <u>www.capgemini.com</u>



A global non-profit organization established in 1971 by banks and insurance companies, Efma facilitates networking between financial services decision-makers. It provides quality insights to help banks and insurance companies make the right decisions to foster innovation and drive their transformation. 120+ financial groups in more than 130 countries are Efma members. Headquartered in Paris. Offices in London, Brussels, Andorra, Milan, Bratislava, Istanbul, Dubai, Tokyo, Kuala Lumpur and Seoul.

Learn more: www.efma.com

©2022 Capgemini and Efma

All Rights Reserved. Capgemini and Efma, their services mentioned herein as well as their logos, are trademarks or registered trademarks of their respective companies. All other company, product and service names mentioned are the trademarks of their respective owners and are used herein with no intention of trademark infringement. No part of this document may be reproduced or copied in any form or by any means without written permission from Capgemini.

Disclaimer

The information contained herein is general in nature and is not intended and should not be construed as professional advice or opinion provided to the user. This document does not purport to be a complete statement of the approaches or steps, which may vary accordingly to individual factors and circumstances necessary for a business to accomplish any particular business goal. This document is provided for informational purposes only; it is meant solely to provide helpful information to the user. This document is not a recommendation of any particular approach and should not be relied upon to address or solve any particular matter. The text of this document was originally written in English. Translation to languages other than English is provided as a convenience to our users. Cappemini and Efma disclaim any responsibility for translation inaccuracies. The information provided herein is on an as-is basis. Cappemini and Efma disclaim any and all representations and warranties of any kind.

Endnotes

- 1. Gallagher Re, "Gallagher Re Natural Catastrophe Events report 2021;" February 3, 2022.
- 2. United Nations Climate Change, "The Paris Agreement;" December 12, 2015
- 3. United Nations, "Key aspects of the Paris Agreement;" December 12, 2015.
- 4. Nature Communications, "Global LiDAR land elevation data reveal greatest sea-level rise vulnerability in the tropics;" June 29, 2021.
- 5. Swiss Re Institute, "The economics of climate change;" April 22, 2021.
- 6. Bloomberg NEF, "Getting on Track for Net-Zero by 2050 Will Require Rapid Scaling of Investment in the Energy Transition Over the Next Ten Years;" July 21, 2021.
- 7. Swiss Re Institute," Sigma Explorer;" accessed March 14, 2022.
- **8.** Swiss Re Sigma Report, "More risk: the changing nature of P&C insurance opportunities to 2040;" September 6, 2021.
- 9. UNDRR Report, ""Human Cost of Disasters An overview of the last 20 years;" accessed February 24, 2022.
- 10. European Insurance and Occupational Pensions Authority, "Climate change: A challenge for our time", September 8, 2021
- 11. Financial Conduct Authority, "Climate-related reporting requirements;" December 17, 2021.
- 12. Marsh," Global Insurance Market Index;" accessed March 17, 2022.
- 13. CAL FIRE, "2020 Incident Archive;" accessed March 7, 2022.
- 14. Bloomberg Quint, "California Sees Rise in Insurers Refusing Home-Policy Renewals;" October 20, 2020.
- 15. The Wall Street Journal, "Wildfire Risk in California Drives Insurers to Pull Policies for Pricey Homes;" January 19, 2022.
- **16.** Swiss Re Institute, "More risk: the changing nature of P&C insurance opportunities to 2040," September 6, 2021.
- 17. Insurance Business Asia, "Sompo bolsters partnership with Praedicat;" November 18, 2021.
- **18.** Case study provided by Efma.
- 19. GWTInsight, "Case Studies: GWTInsight;" October 2020.
- 20. Our thoughts around this concept were inspired by the 2008 bestseller about behavioral economics, "Nudge," by Economics Nobel Prize winner, Richard H. Thaler, and law professor Cass R. Sunstein.
- **21.** Case study provided by Efma
- 22. Microsoft, "Azure helps Munich Re deploy climate change risk assessments that predict the future;" October 21, 2021.
- 23. Zesty.ai, "California approves new AI model for wildfire driven by Zesty.ai and AON;" June 23, 2021.
- 24. Case study provided by Efma.
- 25. Zippa, "Underwriter demographics and Statistics in the US;" accessed March 2022.



Visit

www.worldinsurancereport.com



For more information, please contact:

Capgemini

insurance@capgemini.com

For press inquiries, please contact:

Mary Sacchi

(North America and Rest of the World)

WE Communications for Capgemini Tel.: +1 (212) 551 4818 msacchi@we-worldwide.com

Josh Graham (EMEA)

WE Communications for Capgemini Tel.: +44 (20) 76323820 jgraham@we-worldwide.com

Jana Lednarova (Efma)

Tel.: +421 915 225 611 jana@efma.com

