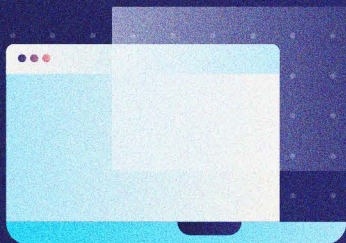
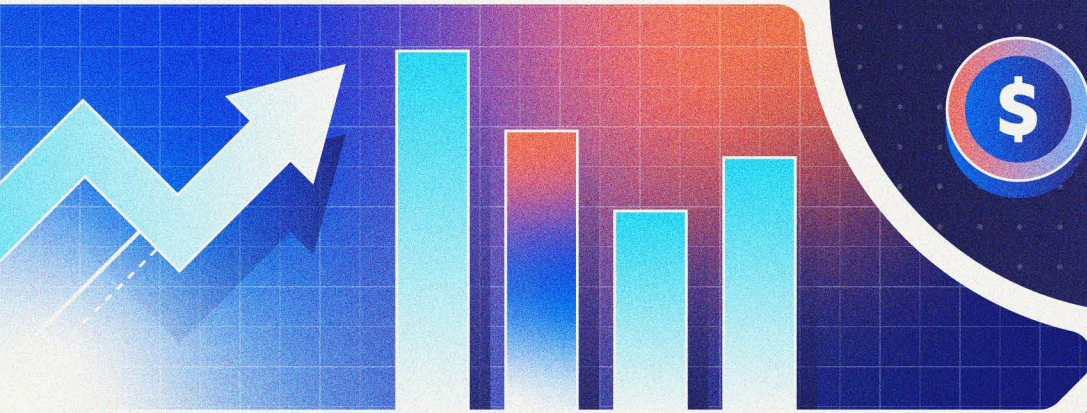
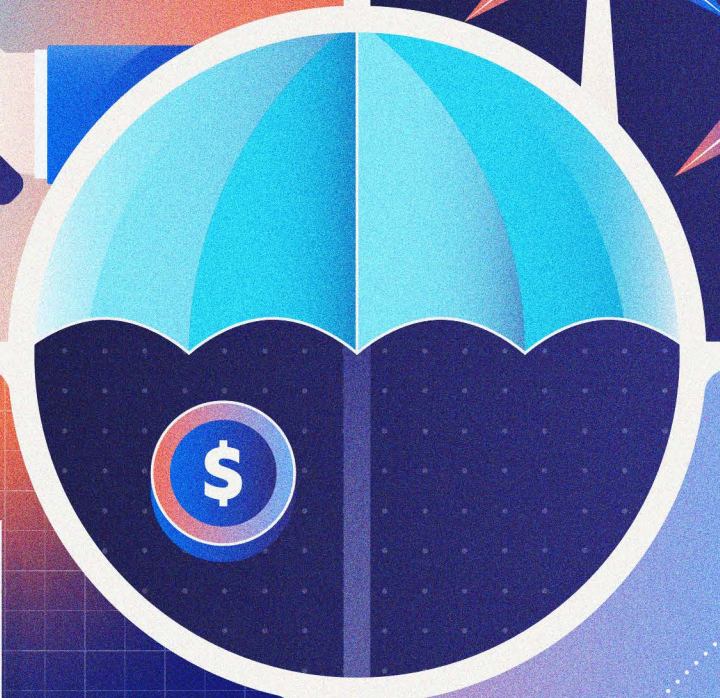
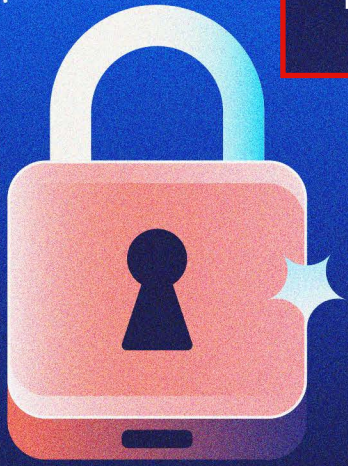
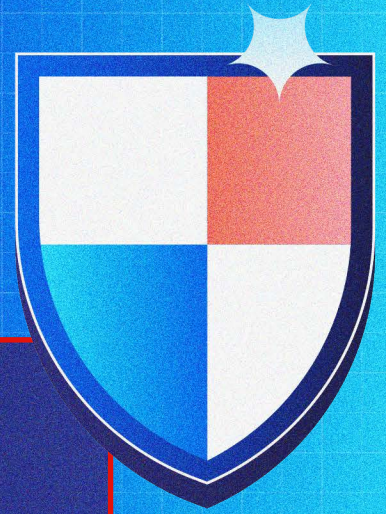


**ECONOMIST
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Revealing the paths to 2040: four possible scenarios for insurance



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About the research

This Economist Impact report, sponsored by SAS, offers insurers four different visions of the world and the industry in 2040. Informed by expert interviews, these scenarios offer detailed, plausible paths forward amid megatrends reshaping the industry.

We would like to thank the following experts for their time and insights:

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Introduction

The insurance sector today finds itself at an inflection point. An industry fundamentally concerned with risk management is grappling with a range of profound uncertainties that will alter its evolution in the coming years. From the rising incidence of extreme weather events and natural disasters due to climate change to geopolitical volatility and shifting demographics, insurers are facing unprecedented challenges. Longstanding risk models are also being upended by rapid technological advances and evolving market needs.

In light of rising uncertainty and unmitigated risks, affordability pressures are becoming more pronounced. Although this is particularly the case among low-income households and regions with higher climate risks, this trend is evident in mature markets too. For instance, due to the rising frequency and severity of extreme weather events, combined with construction in

high-risk areas and the vulnerability of existing ageing infrastructure, homeowners' insurance premiums are increasing to reflect the higher risk exposure. From 2020 to 2023, premiums for home insurance rose faster than disposable incomes in major markets like the US, the UK, Australia and Japan, making insurance less affordable.¹

Technological advances are also playing a pivotal role in shaping the industry's future. More connected sensors and devices create new opportunities for personalised coverage, as well as real-time risk assessment, engagement and preventative maintenance. Meanwhile, insurers are leveraging innovations in artificial intelligence to streamline operations, enhance decision-making and improve risk management. Yet, the pace of technological development and adoption will vary significantly across regions, potentially deepening disparities.

These challenges, along with evolving consumer expectations and fluid regulatory environments, present both risks and opportunities for insurers. To thrive in an increasingly unpredictable environment, the industry's ability to evolve strategically will largely depend on understanding how these forces converge and reshape the risk landscape in the years to come. Some insurers have already demonstrated flexibility and resilience, moving beyond the industry's traditional risk aversion to embrace technological change, new products and innovative business models. But the need for adaptability will continue to grow.

Scenario planning helps align strategies with long-term goals, but, at its core, is about building resilience and fostering agility.

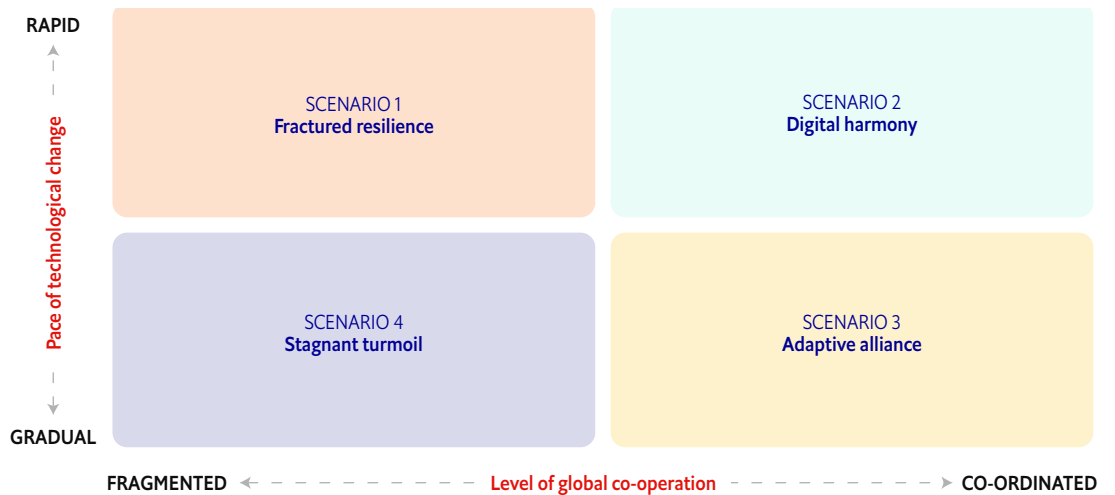
In such a dynamic environment, scenario planning becomes invaluable. Scenarios illuminate how major drivers of change—climate risks, technology adoption, global fragmentation, rising inequities and shifting demographics—may evolve and interact. The point is not to predict the future, but rather to position companies to effectively respond to emerging challenges and seize new opportunities. Scenario planning helps align strategies with long-term goals, but, at its core, is about building resilience and fostering agility.

This briefing paper offers insurers four visions of the world and the industry in 2040. Informed by expert interviews, these scenarios present plausible paths forward amid megatrends reshaping the global economy, geopolitical

landscape and climate. They were developed by assessing key drivers of change through the lens of two critical uncertainties: the pace of technological change and the level of global co-operation and alignment (see Figure 1). Other high-impact, but more predictable factors, such as climate change and demographics, are explored in each scenario based on how they interact with these critical uncertainties.

The scenarios are designed to provoke thought, challenge assumptions and shake up mental models of what the future might hold for the insurance industry. Think of them as prompts to better navigate and adapt to the future, regardless of the direction it takes.

Figure 1: The two main drivers of change across our scenarios: pace of technological change and level of global co-operation

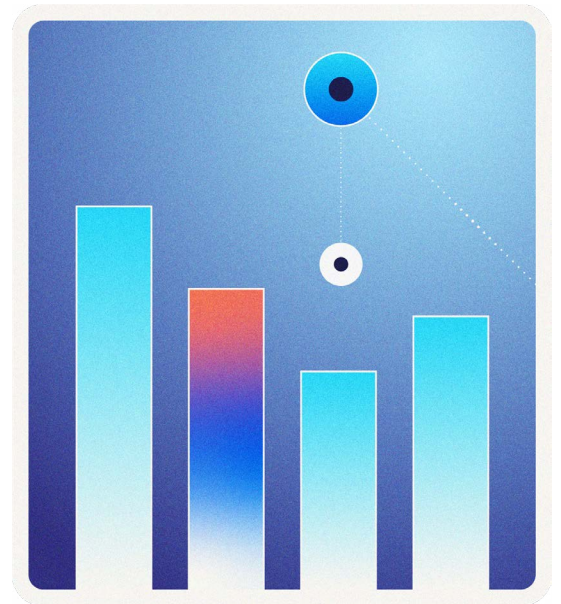


The big picture: megatrends reshaping insurance

The 2040 scenarios presented in this paper are based on the five following megatrends, which are foreseen as the most critical to the insurance industry. They are all global, long-term and interconnected.

- 1. The digital revolution is accelerating,** generating new markets and business opportunities while heightening certain risks (eg, cyberattacks, fraud, misinformation and financial crimes, as well as regulatory and privacy concerns). In the insurance industry, artificial intelligence (AI), including generative AI, is expected to improve risk assessment, provide more personalised products, streamline claim processing, as well as improve fraud detection.² Advancements in biotechnology and genetic engineering are revolutionising industries by enabling the precise manipulation of biological systems for medical treatments, agriculture and environmental solutions. These innovations will challenge existing risk assumptions, prompting insurers to reassess their pricing models.³
- 2. Climate change poses a threat to societies and commerce,** driving companies to take action to mitigate climate risks and enhance shareholder value. Extreme weather events, ranging from heat waves to wildfires and floods, are intensifying, rendering historical data models inadequate among insurers, especially in the long term, while increasing premiums to unsustainable levels in high-risk regions. With mounting legal and regulatory pressures (eg, Climate Risk Disclosure in the US,⁴ and Sustainable Finance Disclosure Regulations in Europe)⁵ insurers will need to take greater action to incorporate climate risks in their investment decisions and better manage climate risk.

- 3. Globalisation is increasingly under pressure**, amid rising nationalism and protectionism. This is driving uncertainty in global supply chains, technology standards and international governance while increasing the exposure of corporate actors to reputational, operational and financial risks. Growing tensions between the US and China are decoupling the world's two largest economic powers, with an increasing technology race further hastening this divide. In 2023 the world experienced 56 conflicts (the most since the second world war), which resulted in the highest number of related deaths over the past 30 years.⁶
- 4. Economic and social inequities are rising**, risking the marginalisation of vulnerable populations. About half of the UN's Sustainable Development Goals are moderately or severely off track to be achieved by 2030, leaving developing economies and the world's poorest populations in a vulnerable position. The global protection gap, representing the difference between insured and uninsured losses, has also risen over the past decade. It has reached US\$1.8trn in premium equivalent terms in 2023. This signals that swathes of the population remain uninsured and vulnerable to external shocks (eg, natural catastrophe, morbidity and mortality). Closing this gap can help reduce poverty and inequality, shielding vulnerable communities from financial hardship.
- 5. Major demographic shifts are under way**, with ageing populations and an increasing number of individuals living in urban areas. By 2040 roughly 15% of the world's population will be aged 65 and older.⁷ As the global population ages and people live longer, the prevalence of chronic disease will significantly increase in the next decade. Population growth between now and 2050 will be concentrated in a select few countries located in Africa, South Asia and North America, raising the importance of safety nets in the most vulnerable countries. Over 50% of the global population now lives in urban areas, and this is expected to reach nearly seven out of ten people in the middle of the century.



Scenario 1: Adaptation in a fragmented, unequal world



The world in 2040

In this scenario, the world in 2040 is characterised by rapid technological progress amid continued global fragmentation and disorder.

Breakthroughs in AI, machine learning (ML), cloud computing and quantum computing,⁸ have fuelled economic growth and advances in healthcare. But in a highly fragmented geopolitical and regulatory landscape, the benefits of these advances are not spread widely.

Growth, along with climate adaptation efforts, is highly unequal across regions, with growing divides between developing and developed economies. The global community missed its most ambitious climate change targets, and adaptation efforts have been markedly uneven. The rise of new technologies—while offering innovative solutions—also comes with increased energy demands, further complicating global efforts to manage climate risks and drive sustainable growth. With only the affluent able to afford private insurance and the insurance industry regionalised, the global protection gap widens considerably.

The path to 2040

2025

An accelerated technology race

- The US and China implemented restrictive policies on cybersecurity, intellectual property (IP) and trade
- Technology governance fragmented, as major powers pursued divergent values

2030

Uneven technology diffusion

- AI, quantum computing and other technologies advanced rapidly
- Limited access to technology worsened the digital divide and economic disparities

2035

Widening inequalities

- Progress on climate action accelerated, but vulnerable countries were left behind
- The insurance industry became regionalised and the global protection gap widened

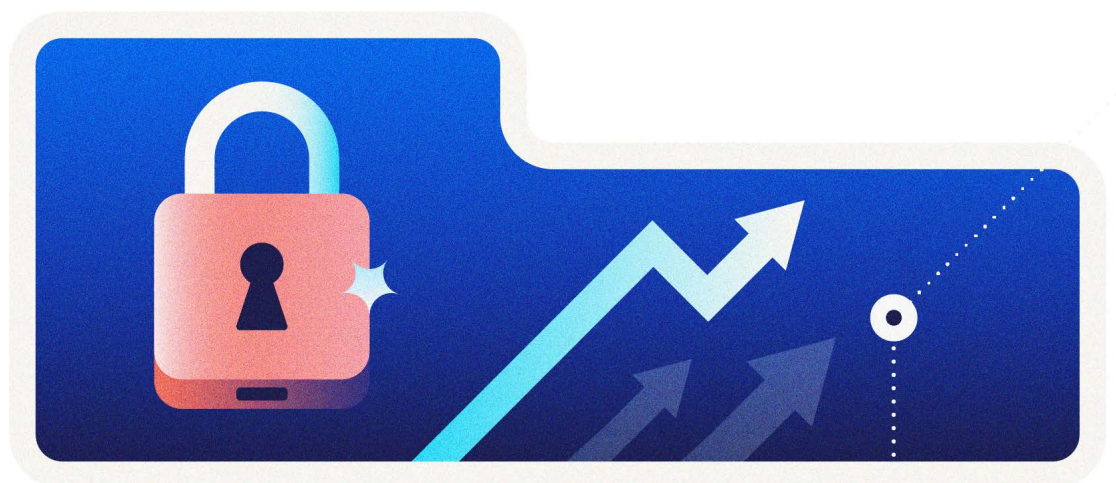
A global technology race restricted access to technologies, widening the digital divide and economic disparities, but spurring regional innovation.

By 2030 the US and China erected policies and regulations on cybersecurity, IP and trade that acted as a barrier to open-source software and technologies. This turn from the open-source approach and global supply chains towards nationalised technology and industrial policies increased economic inequality.

In parallel, divergent technology values emerged across major powers. The EU decided to enforce premium price ceilings on AI-powered personalised insurance products, helping close coverage gaps. Meanwhile, the US continued to leave most technology oversight to the private sector, which both accelerated innovation and increased risks. And China's commitment to centralised, state-directed development only deepened in the 2030s. Big tech giants navigated a patchwork of legal requirements.

While this fragmentation reduced their influence in certain markets, it also presented the opportunity to tailor services to meet local needs, encouraging the development of region-specific solutions.

One result of the technology race was highly uneven investments in emerging technologies that led to a winner-take-most landscape by 2035. In advanced economies, governments, investors and the private sector channelled enormous financial resources to advance AI, ML, cloud computing and quantum computing. Nonetheless, India's investment in digital public infrastructure also led to successes, with AI-powered technologies shared with other developing countries to wield influence.⁹ These developments fuelled productive innovation ecosystems that attracted tech talent—which widened talent and economic gaps between countries. As talent gravitated towards technology hubs in developed countries, migration patterns played a role in exacerbating urban overcrowding, making property prices and the cost of living higher.



Climate action accelerated, albeit unevenly, leaving behind the most vulnerable nations.

In high-income economies, decarbonisation efforts were ambitious—driven by the fast deployment of green technologies, including electric vehicles (EVs), renewable energies and other emerging technologies. Nonetheless, countries reliant on fossil fuels for generating electricity (eg, China, India and Saudi Arabia) were set back on their climate targets, as AI, distributed ledger technology and EVs consumed large amounts of energy.

In parallel, access to other technologies remained unequal, as developing countries were unable to afford them at scale. Additionally, many geographies most exposed and vulnerable to the physical risks of climate change were the least prepared. Consequently, the number of climate refugees significantly increased compared with more than a decade ago, with close to a billion individuals displaced by 2040.¹⁰

In a highly localised insurance sector featuring large disparities in product offerings and pricing across geographies, regulatory arbitrage becomes common, with corporations seeking out the most favourable risk management environment.

Nearing 2040, the insurance industry evolved to mirror the broader economy, with regional differences generating new business models but widening coverage gaps.

In some regions, new insurance models have gone mainstream: smart contracts enable automatic payouts and distributed ledger technologies offer peer-to-peer coverage of niche risks. However, they have also introduced new vulnerabilities, for instance, cyberattacks and regulatory compliance. Meanwhile, other regions restrict or ban these new products, pushing global insurance carriers to acquire smaller players to navigate complex regulations in order to grow.

In a highly localised insurance sector featuring large disparities in product offerings and pricing across geographies, regulatory arbitrage becomes common, with corporations seeking out the most favourable risk management environment. Meanwhile, as some insurers have withdrawn from higher-risk markets—such as regions prone to extreme weather events—a growing number of consumers are stuck in coverage gaps. Similarly, cyber insurance has become scarcer in regions where cyber risks have intensified, while high-risk individuals are denied health coverage in regions dominated by hyper-personalised insurance products.

Complexity in regionalised markets: opportunities and challenges

To thrive in a tech-driven and fragmented future, insurers should focus on investing more in specialised local expertise to develop products tailored to diverse regional needs and navigate a complex regulatory landscape. In fact, tailoring products and services to meet unique regulatory, economic and cultural needs across regions will be essential to capture market share and maintain customer loyalty.

Rather than relying on one emerging technology, insurers need to experiment with a range of technologies. For instance, AI and quantum computing will improve risk assessment and management, which in turn increases insurance coverage among underserved customer segments.¹¹ The ultimate goal is to develop innovative and profitable business models. With rising cyber risks, insurers must also invest in robust and secure data infrastructure to better quantify the nature of these risks.

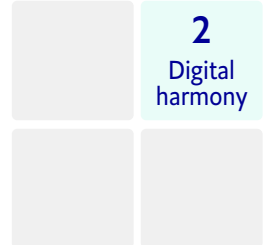
Opportunities

- **Localised market strategies.** In a highly fragmented insurance market, specialisation becomes more necessary and valuable. Insurers have the opportunity to grow in specific regions by meeting each area's unique regulatory and cultural needs. This focus can lead to stronger customer loyalty and higher market penetration—but only if companies are willing to take a careful, market-by-market approach that puts unique customer (and compliance) needs at the centre.
- **Fraud and cybersecurity solutions.** Cyber threats and fraud losses will only multiply as digitalisation continues around the world, presenting the insurance industry with a huge—yet hugely challenging—opportunity. Narrowing the gap between cybercrime and cyber insurance premiums requires risk models that better quantify risks in a highly dynamic threat environment. As quantum computing and AI advance and other factors create new risks, collaboration between the industry and other stakeholders (eg, hardware and software makers and the government) will be crucial to respond to and price new risks.

Challenges

- **Regulatory risk management.** Thriving in a fragmented landscape requires agility. Navigating a changing regulatory patchwork will require investments in legal expertise and compliance infrastructure, which can drive up operating costs. Some insurers will likely cut their losses and focus on less risky markets. That could increase return on investment for organisations that try to take a broader approach with a longer strategic horizon.
- **Exclusionary pricing.** As risk-pricing models grow more targeted thanks to personal data streams and AI, the potential for high-risk individuals to be priced out of insurance markets grows. This could generate public backlash and regulatory scrutiny. Insurers must carefully balance the potential benefits of personalisation with equity and affordability considerations. Solutions could include subsidised products.

Scenario 2: Customer-centred transformation takes hold



The world in 2040

The world is relatively stable in this scenario, having made substantial progress on addressing climate change and global health challenges. A combination of international co-operation, rapid technology advances and improved risk management strategies has helped narrow the global protection gap in various parts of the world, especially in Asia-Pacific.

Major leaps forward in AI directed towards personalised medicine and drug development and design have made it possible to imagine eradicating some major health concerns, such as cardiovascular and respiratory diseases, tropical diseases, and some types of cancer. Although health inequities persist, millions of deaths are prevented in low- and middle-income countries, as cardiovascular diseases are effectively managed and treated.¹² On the climate front, movement towards net-zero emission goals is accelerating after investments in emerging technologies ramped up.

The path to 2040

2025

The rise of personalised insurance

- The US, China and the EU collaborated on digital identity and data protection regulations
- The insurance industry shifted towards personalised offerings due to the easier regulatory landscape

2030

Focus on health prevention

- Major investments in health literacy and preventive care reduced disparities
- Insurers and healthcare providers collaborated on wide-scale preventive health measures

2035

Insurers and climate resilience

- Green technologies were deployed at scale, and progress was made towards net-zero goals
- Insurers were seen as essential players in the race to reduce climate risks and the challenges associated with emerging green technologies



In the late 2020s the global harmonisation of standards reshaped the insurance industry, fostering more personalised offerings.

The US, China and the EU worked through multilateral institutions to enact global regulations safeguarding digital identities and personal data. While nations like Japan and South Korea took significant steps to align their data protection laws with international standards, other countries in the region, such as India, were slower to adapt.¹³ These developments spurred innovation by simplifying the regulatory landscape and building trust. It also represented a key moment in the insurance industry's turn towards customer-centricity and mastering new risk pricing models.

Insurers then moved quickly to jettison legacy systems and embrace the full potential of digital technologies and new data streams, tailoring products to individuals' preferences and behaviour. Real-time data streams supporting dynamic risk assessments were integrated into vehicle, health and other insurance products.

Cross-sector co-operation proved crucial in shifting healthcare systems, other economic sectors and insurers towards a prevention-focused approach.

After years of growing interest in the social determinants of health and "whole health" approaches to care, 2028 saw the beginning of large-scale investments in health literacy and preventive care. Governments expanded excise taxes on alcohol, tobacco and sugar-sweetened beverages,¹⁴ financially benefiting low-income households through lower healthcare costs and welfare gains in the long term.¹⁵

Hospitals, pharmacies and insurers co-ordinated with local and national governments to ramp up effective health literacy campaigns, helping individuals across all socio-economic levels make better health-related decisions and access healthcare. Insurers worked with providers to adopt value-based payment models, shifting from fee-for-service to outcome-based payments that encouraged preventive care and lower healthcare costs. By collaborating with the healthcare system, insurers developed databases to better assess the materiality of climate change on health and wellbeing, and developed solutions for reducing and preventing these risks.

At the same time, improved monitoring of chronic conditions via wearables enabled more personalised care and insurance plans, helping to reduce hospitalisations and improve health outcomes. Health insurers supported the paradigm shift not only by incentivising healthy behaviours but also by offering products integrating personal health data streams, which inform risk assessments and pricing. Additionally, the healthcare sector saw a sharp uptick in private-sector financing in technologies such as gene editing and AI-backed drug discovery tools.

There were protests over disparate pricing practices that made policies unaffordable to high-risk individuals, to which some governments responded with subsidies. As trust in data privacy vis à vis insurers grew, along with evidence that prevention- and incentive-focused interventions work, public support broadened.

In the mid-2030s, the world was on track to reach its net-zero goals by mid-century, as climate technologies decarbonised heavy industries at an unprecedented speed and scale.¹⁶ Additionally, the cost of these technologies became competitive with carbon-intensive alternatives, thus allowing more equitable access across both developed and developing economies.¹⁷ Green hydrogen, powered by renewables, became commonplace. Large-scale battery systems moved energy grids beyond fossil fuels. Carbon capture and storage systems were scaled up at steel and concrete plants. Insurers played a key role in unlocking capital for early-stage climate solutions by developing risk management standards and training the workforce in industries like manufacturing and supply chains.

The mining of critical minerals essential for the energy transition impacted ecosystems and biodiversity. However, the environmental

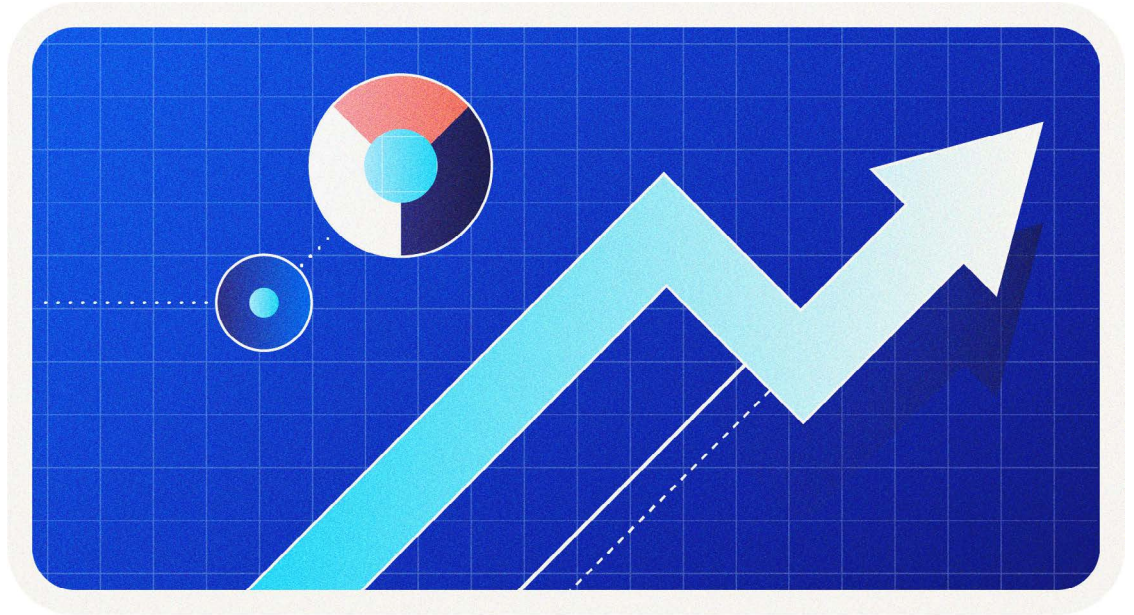
Almost 50% of emissions reductions needed for net zero transition by 2050 depend on technologies not yet available on the market.



Source: Net Zero by 2050, IEA.

degradation was contained due to increased transparency and accountability from mining companies. Beyond mining, efforts were under way to assess the environmental impacts of new climate technologies across their life-cycle. With the advancement of the circular economy, recycling of EV batteries achieved scale, while solutions for the decommissioning of solar, wind turbines and other renewables became mature. Furthermore, environmental regulators implemented policies and regulations that reduced pollution.¹⁸

Working with governments, policy holders, and a range of other stakeholders, insurers championed approaches that reduce existing climate risks and prevent new ones. These actions served well to protect crops and food security, and prolong human life, helping to build societal resilience to natural disasters and prevent other adverse life events.



Accelerating transformation: opportunities and challenges

In a data-driven future, insurers will use technology to offer personalised products and enhance customer experience. To succeed, insurers need to build and maintain customer trust by promoting greater transparency, strengthening data protection and building clear ethical guidelines. This means simplifying policies and explaining how data influence pricing and coverage, ensuring customers fully understand their options.

Insurers will have to build a strong workforce and enhance their operational agility to adapt quickly to a risk landscape that's changing with emerging technologies and various external factors. This involves reevaluating underwriting to align with new risk pools resulting from innovations like genetic testing and autonomous vehicles. Additionally, insurers need to focus on service and price differentiation to ensure personalised products remain accessible and affordable for a broad range of customers. They should also collaborate closely with governments to keep insurance affordable for high-risk individuals and promote greater health equity.

Opportunities

- **Enhanced customer-centricity.**

The insurance industry has the opportunity to close the global protection gap and bolster health equity by tailoring products to individuals' specific risk profiles and preferences. Doing so will require leveraging data and technology to design more inclusive products appealing to underserved populations. However, insurers should be mindful of how personalised pricing can lead to negative consequences, such as pricing higher-risk individuals out of markets. Exclusionary practices can also unfold in cases when medical technologies diagnose incurable diseases, stressing the importance of clear ethical guardrails to protect consumers.

Insurers also have an opportunity to more fundamentally rethink how they relate to customers. Rather than engaging with customers only during policy renewals and payments, they could create an ongoing relationship defined by both real-time risk assessments and behavioural change incentives. Better health outcomes and more loyal customers could result.

- **Accelerating pre-commercialisation, deployment and scaling of climate technologies.**¹⁹ Insurers can help speed up decarbonisation by catalysing the maturation of emerging technologies such as carbon capture and storage, green hydrogen, and industrial geothermal, and expedite their market readiness. They can engage with developers at the onset of projects to ensure risks are considered, assessed and managed more holistically, possibly shortening the time to conduct due diligence before providing coverage.

For technologies at the demonstration or early deployment stages, insurers can engage with various stakeholders to assess untested risks, develop risk management solutions and establish standard certifications. These actions will make projects less financially risky, enhancing insurability for a growing array of capital projects so that they realise their potential.

The industry can also aggressively develop forward-looking climate risk models to better manage their portfolios and move into new areas.²⁰ This will create new products and services (eg, parametric solutions) that de-risk physical assets and incentivise decarbonisation projects.²¹

“Engaging insurers’ risk engineers from demonstration and deployment stages of emerging technologies can unlock capital and expedite market readiness to scale these solutions for the climate transition.”

Maryam Golnaraghi, director of climate change and environment, Geneva Association

Challenges

- **Data privacy and protection.**
By definition, insurance products tailored to individuals require sensitive personal information, which is typically protected. However, data regulations like the EU's General Data Protection Regulation (GDPR) can restrict the processing of such information, along with the provision of personalised insurance offerings. Additionally, growing fraud and cyber threats and evolving data privacy regulations mean that insurers will have to prioritise investments in data security infrastructure and their workforce. A customer's willingness to share personal data requires trust.
- **Adapting to changing risk pools.**
New and emerging technologies will redefine population risk pools, requiring insurers to evolve their business models, including product underwriting and policy terms. For example, genetic testing and editing may prevent diseases and improve patient outcomes, reducing healthcare costs and policy premiums. This creates information asymmetry and leads to adverse selection, as personal data are not accessible to insurers. Similarly, autonomous vehicles may reduce collisions and shift liability away from owners. As renewable and decarbonisation technologies develop, insurers will need to build technology-specific risk engineering expertise and cross-sectoral collaboration to update their data models to reflect current risk levels.



Scenario 3: Insurers spur climate resilience



The world in 2040

In 2040 the world is grappling with the intensifying effects of climate change, due to insufficient efforts to reduce greenhouse gas emissions. Average temperatures are on track to warm to at least 2°C above pre-industrial levels by the end of the century.²² The intensity and frequency of heat waves, wildfires, floods, hurricanes and other extreme weather events has steadily surged for decades.

Some ecosystems have collapsed, causing species to go extinct. Severe water shortages, rising sea levels and falling agricultural yields affect billions of people. These effects are especially pronounced in the least prepared regions such as sub-Saharan Africa, the Middle East and Central Asia.²³ While governments and businesses could not co-operate to prevent climate change, they worked together to make physical infrastructure, real estate, health systems and even some natural ecosystems more resilient to its impacts.

The path to 2040

2025

Pricing climate risk

- In 2025 the EU Corporate Sustainability Reporting Directive came into effect
- Other major economies introduced similar regulations that enabled financial markets to reflect climate risks

2030

Financing climate resilience

- Governments reallocated budgets from recovery aid to prevention
- The global financial system was restructured to support climate resilience

2035

Scaling climate adaptation

- Banks offered climate-risk adjusted mortgages, encouraging homeowners to retrofit their properties
- Governments retrofitted and even overhauled ageing infrastructure to ensure its resilience to future climate shocks

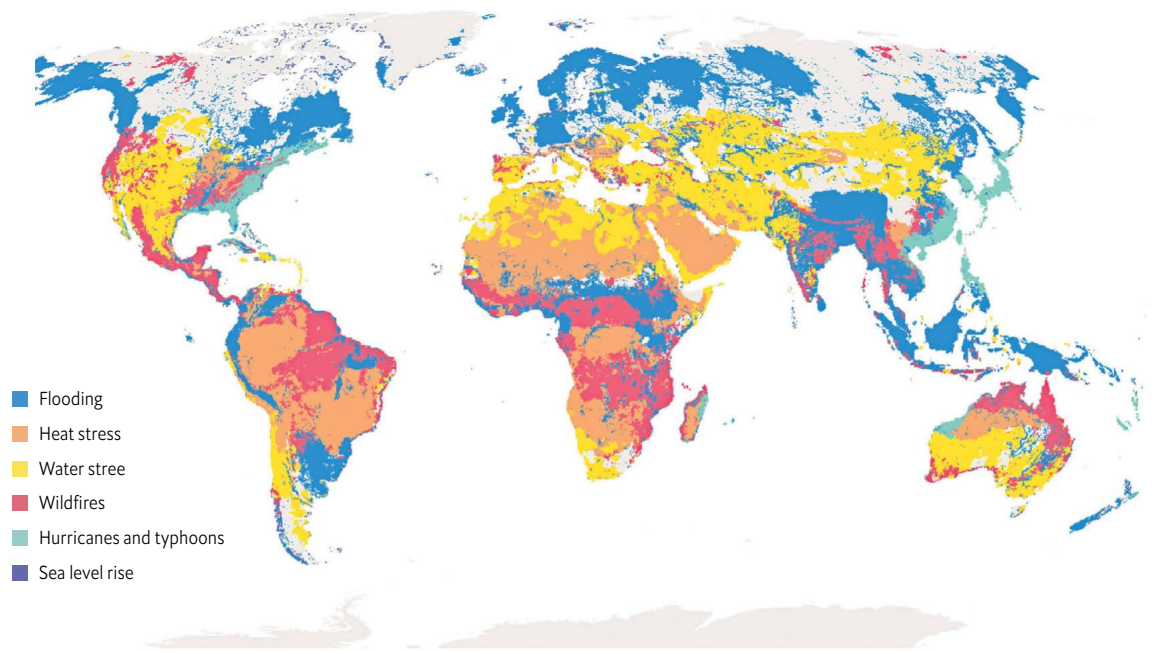
A set of regulations strengthened the integration of climate risks into asset valuation, financing decisions and insurance underwriting. As the EU Corporate Sustainability Reporting Directive came into effect in 2025, the financial services industry significantly improved its ability to assess the risks associated with climate change. Following the EU's lead, other major economies introduced similar disclosure frameworks, bringing global financial practices into alignment with sustainability objectives. Insurers played an important role in compliance by leveraging risk modelling practices developed in prior years.

Technological innovations emerged as a game-changer, improving the accuracy of climate impact forecasting and enabling more targeted adaptation measures. AI-powered analytics and real-time monitoring through drones,

satellites, and sensors gave businesses timely insights into infrastructure conditions. By 2030 widespread adoption of improved climate risk pricing allowed financial markets to reflect these risks more accurately in asset valuations.

Advances in climate financing played a crucial role, allowing cash-strapped governments to expedite adaptation actions. In 2030, as the effects of climate change grew more severe and inequitable, on-the-ground impacts became more visible and governments reallocated their budgets. National disaster recovery and response policies were reformed, with post-disaster aid programmes providing more funding towards preventive measures. For every dollar invested in prevention, multiple dollars were saved on recovery relief, underscoring the benefits of proactive climate action.²⁴

Figure 2: Top climate risks across the globe by 2040, if greenhouse gas emissions are not cut drastically



Sources: Four Twenty Seven, and The New York Times.

At a pivotal COP35 summit held in Barbados, the Bridgetown Initiative²⁵ was also adopted, restructuring global financial systems to support climate resilience. The initiative led to more favourable loan terms for low-income economies and established a loss and damage fund to aid developing countries in coping with climate impacts. Each year in the decade leading up to 2040, hundreds of billions of US dollars in private financing were channelled to promote climate resilience. The large adaptation finance gap that existed 15 years earlier was eliminated,²⁶ allowing the development of flood defences, early warning systems and drought-resistant crops in the most vulnerable areas.

“An all of society approach to reducing extreme weather risks of homes throughout their lifecycle involves land zoning, enforcing new building codes, retrofitting homes, enhancing landscapes to maintain natural ecosystems and strengthening the resilience of critical infrastructure.”

Maryam Golnaraghi, director of climate change and environment, Geneva Association

With climate risks transparently priced and funding accessible, all of society embraced preventative measures. In advanced economies, banks offered climate-risk adjusted mortgages, encouraging homeowners to retrofit their properties. These retrofits lowered insurance premiums and preserved property values, which were at risk of devaluation as climate risks were not fully captured.²⁷ Local and state governments retrofitted and even overhauled ageing infrastructure—such as bridges, sewage systems and ports—to ensure resilience to future climate shocks. New resilience building codes were introduced, prohibiting the development of infrastructure in high-risk zones, where insurers stopped providing coverage. Tax incentives and subsidies motivated businesses, households and communities to implement sustainable practices.

In low- and lower-middle-income economies, the focus remained on saving lives and supporting livelihoods. Adaptation campaigns, such as early warning systems, reduced the negative impact of climate disasters. From the African Union’s initiatives to strengthen resilience in vulnerable communities to partnerships in South-east Asia focused on disaster preparedness, these campaigns bolstered adaptive capacity across diverse regions.

Spurring resilience: opportunities and challenges

Navigating the changing landscape of climate risks calls for insurers to act swiftly and strategically, and improve their ability to anticipate potential risks more accurately. To get closer to this goal, insurers must not only rely on historical data sources, but also leverage new types—such as real-time environmental monitoring and advanced predictive analytics. This forward-looking approach enables the development of tailored products that align with the evolving needs of clients. In addition, insurers need to invest in technologies such as AI and ML

to improve predictive capabilities and foster a proactive rather than reactive stance.

Collaboration with a diverse array of stakeholders, including governments, non-government organisations and local communities, can be pivotal. Engaging in partnerships that support climate resilience initiatives may create a stronger safety net for vulnerable populations. To contribute to a more robust risk management framework, insurers should establish clear guidelines and processes for assessing climate risks across operational levels.

Opportunities

- **Provide climate solutions.** In response to growing climate impacts, a stronger focus on prevention by governments and other stakeholders can expand insurance coverage. Crop, natural catastrophe, and parametric products aligned with government-defined location-based risk tiers, along with subsidies and tax incentives, can make premiums more affordable for those most at risk. This would enhance the recovery capacity of individuals, businesses and countries after extreme weather events.^{28,29} However, pushback against ESG initiatives may hinder the development of climate-focused insurance products.

In parallel, “insurance companies can increase their investment in research and development to identify risk reduction and prevention solutions, and translate these into guidelines for homeowners, neighbourhoods, communities and local governments,” says Maryam Golnaraghi, director of climate change and environment at the Geneva Association.

She adds that this knowledge needs to be disseminated in innovative ways across society, including via partnerships with academic institutions to train home inspectors, mortgage analysts, insurance brokers and home appraisers.

- **Increase trust by linking insurance to resilience.** Insurers should be out front, in collaboration with governments and multilateral institutions, raising awareness about the importance of climate adaptation and resilience. If the industry can reframe its role in the climate change era as an engine of resilience (as opposed to a business seeking profits), insurers can become trusted in at-risk communities. One way they can do this is by investing a portion of their nearly US\$40trn in collective assets³⁰ to directly support climate resilience projects. These investments could be made in partnership with international non-governmental organisations, governments and philanthropic institutions.

Challenges

- **Concentrated exposure and vulnerability to climate risks.**

Around the world, many large cities are particularly exposed and vulnerable to the impacts of extreme weather events and rising sea levels. These cities, such as Manila, Bangkok and Ho Chi Minh City,³¹ have a high concentration of assets and substantial populations, creating large financial vulnerabilities for insurers. These risks, exacerbated by factors like ageing, inadequate infrastructure and rapid urbanisation, could lead insurers to unsustainable losses and insufficient risk pool capacity.

- **Forward-looking risk modelling.**

The insurance industry has always run on data. But recent years have seen an unprecedented proliferation in the scope and volume of data—behavioural, telematic and financial—that many carriers collect. Rather than relying on historical data that do not consider future policy challenges, insurers need to collect and access novel sources of data to better inform their risk modelling. As the volatility of climate-related events escalates, the presence of unpredictable occurrences adds complexity to forecasting and forward-looking scenario analysis, challenging the ability to effectively address future risks at different timescales.

“Large cities account for over 75% of global GDP, and are increasingly vulnerable to the more frequent and severe impacts of climate change. Without adaptation action, these economic assets can essentially become uninsurable, with catastrophic economic consequences.”

Andre Belelieu, head of financial services industries, World Economic Forum



Scenario 4: A struggle to adapt in a polycrisis world



The world in 2040

In this scenario, the world faces multiple, mounting crises as slowing technological advances and a fragmenting global order compound challenges. The productivity and innovation gains many had expected by 2030 did not materialise, in part because the major competing powers adopted increasingly protective, isolationist stances on trade and technology.

As supply chain disruptions and weather events become more frequent and severe, many sectors, including insurance, struggle to adapt. Corporate leaders are as hungry as ever for new, innovative solutions to drive competitive advantages. But difficulty agreeing on industry standards and guidelines—and governments' increasingly onerous tech regulations enacted to manage national security risks—stymie growth and undermine global stability.

The path to 2040

2025

Technology's limitations emerge

- Security and privacy concerns led to a tightening of AI regulations
- Companies' research and development budgets were slashed

2030

Isolationist policies hinder insurance coverage

- Isolationist policies slowed down innovation and economic growth
- The insurance sector struggled to adapt to rapid changes and escalating risks

2035

A widening protection gap

- Disparities in insurance coverage grew, especially in emerging markets
- State-backed insurance programmes struggled to fill the insurance coverage gap

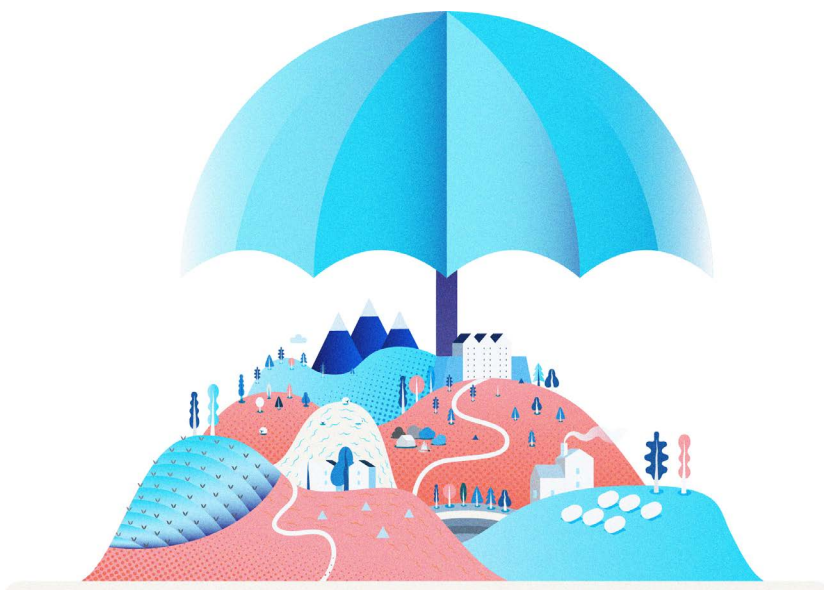
Major advances in AI offer valuable new use cases to many sectors, but its dangers—such as bias and job elimination—also become apparent. In 2027 there was a major regulatory pivot in many countries. Worried about popular backlash and growing national security threats from AI and other high-tech tools wielded by adversaries, governments rushed to put the genie back in the bottle.

In the EU, the US and China, as well as many developing regions, a range of newly stringent requirements made it much more difficult and expensive for companies to push technologies forward. Many slashed research and development budgets, mindful that consumers' demand for new technology products and services had fallen precipitously since the early 2020s, along with public trust in tech companies.

By 2030 trade and immigration policies turned inward, undermining the insurance industry's ability to cover regions vulnerable to climate change. Trade policies of major powers had mostly become foreign policy tools, as countries tried to guard their domestic economies. Immigration policies took a similar turn, with governments adopting restrictive approaches due to growing fears concerning impoverished climate refugees and job displacement. This dynamic was partly fuelled by the online spread of misinformation and toxic content.

In a fragmented political and economic environment characterised by both rapidly changing risks and slowing technology innovations, the insurance industry struggled to adapt. Reinsurance companies faced restrictions in entering new markets, which in turn challenged the ability of insurers to transfer risks. As international collaboration waned in the ten years leading up to 2035, the effects of climate change intensified. The absence of collaboration on trade and technology substantially undermined efforts to mitigate climate change, by limiting the exchange of the technologies, data and innovative solutions necessary to safeguard countries against extreme weather events. Additionally, this fragmentation led to reduced financial flows to the most vulnerable countries.

India faced unique challenges as the effects of climate change intensified. The country, with its diverse climates, experienced significant agricultural disruption and increased flooding, particularly in low-lying areas. The government sought to promote public-private partnerships to enhance insurance accessibility in agriculture; however, these initiatives faced challenges related to premium costs and varying levels of awareness among farmers regarding the available products.³²



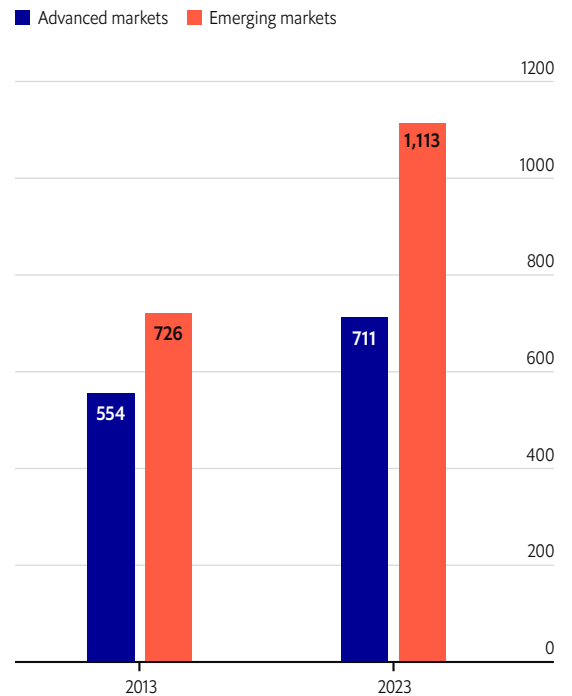
Beyond property damage, crop failures and climate migration ramped up. Unable to accurately model or price escalating risks, some insurers began withdrawing from particularly vulnerable markets in the latter half of the 2030s to avoid bankruptcy.

While the protection gap reached historic heights in the US by 2040, the gap is far greater in emerging markets, straining their public resources and leaving many without coverage. Just a minority saw their needs met in these places across crop, natural catastrophe, health and life insurance; this inadequacy increased vulnerability to economic shocks, deterred investment, strained public resources and heightened food security risks, ultimately stifling economic development.

With large portions of the global population under-insured or entirely lacking coverage against major risks, economic instability rose and disaster recovery slowed. State-backed insurance programmes attempted to fill some gaps, but they struggled amid mounting losses. In some regions, community-based insurance systems emerged, with local residents pooling funds to offset costs. But these lacked the stability and scope of coverage offered by traditional insurers.

Health insurance markets, in particular, were under increasing strain as the health impacts of climate change became more widespread and population ageing accelerated, pushing up demand for healthcare services. As a result, policyholders—especially those in vulnerable groups—faced sharp increases in premiums and out-of-pocket expenses, where such increases were allowed. In the late 2030s, after the collapse of a few regional health insurers, major US health insurers launched aggressive campaigns to convince political leaders that the status quo is unsustainable. They pushed for subsidies designed to make risk pools financially sustainable.

Figure 3. Global protection gap (2013-23), US\$ billion



Source: SwissRe.

Agility amid volatility: opportunities and challenges

In this complex and rapidly evolving risk landscape, the urgency for the insurance industry to rethink its approach is increasingly evident. Focusing solely on capital and profitability risks overlooking broader societal challenges, particularly as the effects of climate change and economic disparity become more pronounced. Instead, the question becomes: how can the industry reframe its priorities, not only to navigate future uncertainties but also to address the needs of vulnerable communities? Insurers will have to rethink their approach here, from viewing risks purely through a financial lens to taking greater account of the long-term societal and environmental impacts.

While technological advances, collaboration and tailored solutions offer potential pathways forward, insurers will need to assess how they can adapt their practices in response to emerging challenges. To cater to specific markets—especially in areas like agriculture and health, where the coverage gaps are most evident—insurers should invest in innovation with both product design and risk assessment. For insurers to remain relevant and resilient in an uncertain future, it will be essential for them to continue building trust and working with both regulators and local communities to address the growing protection gap.

Opportunities

- Multi-stakeholder collaboration.** When the risks of go-it-alone tech innovation (and regulatory compliance) rise, so does the value of cross-organisational collaboration.³³ Partnering with insurtech companies, for example, can help traditional insurers integrate new technologies to improve customer experiences and products, and capture new efficiencies. But in periods of growing volatility and economic inequality, incumbent insurers should also look further afield for partners. Collaborating with governments, re-insurers and multilateral institutions could help insurers manage uncertainties, shape the regulatory environment and better understand evolving customer and societal needs.³⁴
- Customisation.** In the context of fragmented global markets, the ability to create customised insurance products geared to the specific needs and risks of individual communities, countries or regions becomes key to sustaining growth. In an effort to tailor insurance to their needs, businesses could underwrite their own risks by establishing captive insurance subsidiaries.

Challenges

- **Regulatory compliance.** Insurers must continually prepare for a patchwork of ESG-related reporting requirements across countries, adding complexity to existing financial regulatory obligations (eg, ICS, IFRS). Managing this web of regulation increases the cost of compliance, particularly for multinational companies. In this context of geopolitical fragmentation, insurers' customers are likely to be affected by exposure to sanctions, export controls and other compliance-related expenses, further complicating risk management and underwriting processes within the insurance industry.
- **Rising insurance premiums.** Intensifying climate change effects, ageing populations and other factors will likely increase the cost of reinsurance and complicate accurate risk-pricing, leading to higher premiums. Unaffordable policies will widen the protection gap, exacerbating inequality across income brackets and between developed and developing markets. Ultimately, this could destabilise societies and insurers' reputational risks.



The paths forward

The future is inherently uncertain. It is unlikely to look like any of these particular scenarios and may contain elements of all four. Black swan events will no doubt occur, reshaping markets, nations and the insurance industry in dramatic, unpredictable ways.

Yet insurers can still prepare for whatever comes around the corner. These scenarios allow us to see how certain combinations of events, developments and sociocultural changes could shape the future. The basic contours of change are clear enough. Rapidly changing climates are raising risks while presenting new opportunities. Geopolitical shifts and volatility will increase the competitive value of agility. Technological advancements, including those in AI, enable more individualised products and pricing, but also raise ethical concerns about affordability.

At a fundamental level, the insurance sector will need to innovate and evolve its business models. For example, traditional insurance models struggle to factor in multiple risks and their interactions, which an individual or business can face. The more the industry can design new risk management solutions with a customer-centric approach that meet changing societal and economic needs, the more likely it will improve its relevance and reputation.

Partnerships both within and beyond the industry could help to speed up change and ensure that insurers are well positioned to thrive amid uncertainty. Risk management, data analytics and predictive modelling are all core competencies in the industry—and this expertise could help governments develop effective climate adaptation strategies. Public-private partnerships could drive the development of new insurance products that address demographic challenges, such as ageing populations, at scale.

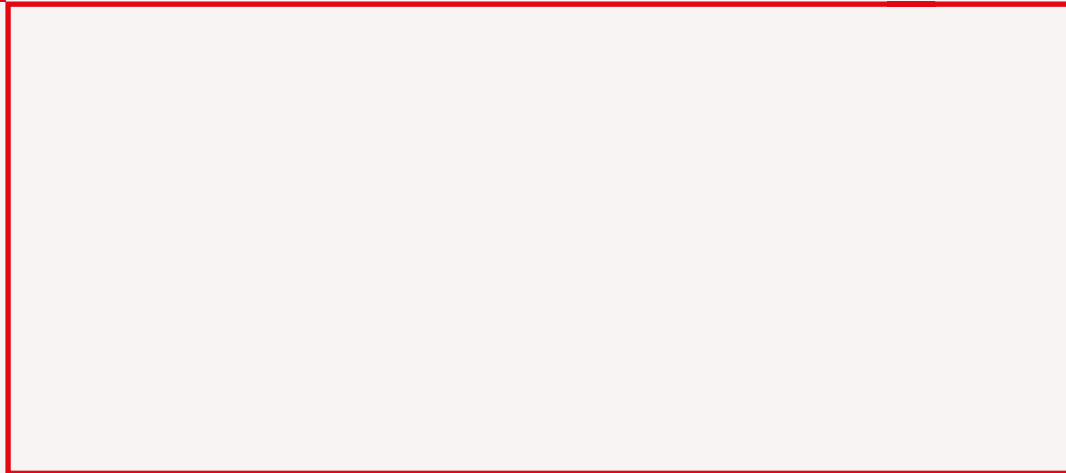
As the scale of major global challenges mount, the risk of the global protection gap growing into a chasm rises. The private insurance sector can mitigate this risk by making its products more accessible, appealing and affordable. Seamless customer experiences could attract younger generations. Alternative distribution channels (eg, utility and remittance companies and mobile network operators) could expand access to underserved customers. And wider access to microinsurance could make life, property and agriculture policies more affordable to hundreds of millions, even billions, of people.

Plenty of paths forward are possible—and they are not mutually exclusive. The faster insurers can summon the energy and strategic strength to chart a new course, the more time they'll have to course-correct before it's too late.

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