2023 Global Insurance Outlook

Driving purposeful change in uncertain times



A message from the EY Insurance leadership team

Barely recovered from the powerful effects of a global pandemic, the insurance industry now finds itself confronted with greater macroeconomic uncertainty and geopolitical volatility than it has seen in decades.

Of course, there are also many compelling opportunities for insurers to innovate and create more value for their customers and shareholders, as well as society as a whole.

The 2023 edition of the annual EY Global Insurance Outlook explores these complex market dynamics and their impact on insurers' growth and transformation plans, product and investment portfolios and financial performance. We also view current events and market conditions through the lens of the industry's purpose, which seems to grow more relevant by the day. The huge and growing protection and savings gaps clearly demonstrate that more people need insurance against a range of complex and proliferating threats. Climate and cyber risks top the lists for all types of insurance customers - from the largest corporations to small and mid-size businesses, to individuals in high-risk areas and those who want to lead greener or more digital lives. The bottom line is that customer needs have changed and insurers that move most swiftly to satisfy them will be in the best position to navigate the recession.

An economic downturn, a hot war in Europe and simmering conflicts between global and regional powers are on the minds of citizens worldwide. They've also made their way to the top of the agendas of boards and senior executives in the insurance industry.

Purpose is inspiring many of the most creative new business models and value propositions that we highlight on the following pages. These innovations keep us optimistic about the industry's future, despite challenging conditions in the immediate term. Traditional insurance companies, InsurTechs, start-ups and non-traditional players are delivering unique solutions that combine conventional protection with risk prevention and other high-value services.

The operational agility and resilience insurers showed during the last few years will serve them well in the turbulent market ahead. As ever, creative thinking and bold action will be richly rewarded. Firms that innovate with urgency, optimize operations across the value chain and build new partnerships will make a meaningful impact for billions of people around the globe, as well as on their own bottom lines.

We welcome the opportunity to discuss your perspective on these issues and their impacts on your company.



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About the Outlooks

EY Global Insurance Outlooks are annual reports that reflect our perspective on where the industry is today and where it needs to be in 18 to 24 months, based on the thinking of our entire Insurance team and our direct engagement with insurers across global markets. Our NextWave Insurance series takes a view of the coming decade, with the annual Outlooks tracking near-term progress. You can find some of our recent content on page 30.

Executive summary

It's impossible to discuss the current state of the global insurance industry or its future growth prospects without addressing a highly uncertain macroeconomic and geopolitical landscape. From the lingering aftereffects of the pandemic on workforces and supply chains worldwide, to the war in Ukraine and rising tensions between major global players, to spiking interest rates, increasing inflation and fluctuating currency valuations, every part of the insurance market has been forced to rethink fundamental assumptions.

Looking across long-term horizons, relentless technology advancement, ever-rising consumer expectations and competitive chaos (resulting from the dissolution of industry boundaries) are reshaping the very definition of insurance. More people want stronger protections for what they value most. They seek financial security and greater peace of mind in the face of different, more severe – and frankly, more frightening – threats. Insurers have always prided themselves on delivering exactly such protection and security, but consumers today care less about who delivers the value they're looking for than about receiving the value in a simple, efficient way. These trends are not independent forces, of course. Rather, they are intricately related and mutually reinforcing, which is what makes them so powerful and difficult to manage. Consider how macroeconomic pressure is driving demand for simpler, more accessible coverage, such as that available through embedded insurance, and how geopolitical tensions can elevate climate risks and make it harder to sustain progress toward a lowercarbon economy.

Despite the headwinds, it's clear that insurers must continue on their transformation journeys. They've come too far already and the future benefits are too great not to press on. Those firms that choose the right investments today will strengthen organizational resilience and gain a sustainable competitive advantage as the economy inevitably returns to health.

Forward-looking and confident firms will seek opportunities to improve the customer experience, develop more sophisticated pricing models and increase their operational resilience. On the following pages, we include recommended actions to help insurers navigate the challenging time ahead and return to growth sooner rather than later.

Keyed to these market realities, this year's Global Insurance Outlook focuses on:

- 1. A turbulent macroeconomic and geopolitical landscape
- The huge global protection gaps caused by the combination of climate change, cyber threats and social and demographic changes
- The need for new value propositions and solutions, which represents an invitation to innovate and an opportunity for insurers to restore their relevance

Insurers that make the right investments today will strengthen organizational resilience and gain a sustainable competitive advantage tomorrow.

Property and casualty

		Americas	Europe, Middle East, India, Africa (EMEIA)	Asia-Pacific
Gross written premium (US\$b)	2021	2,291	894	677
	2016	1,730	680	508
	Five-year CAGR	5.8%	5.6%	5.9%
Penetration (% of GDP)	2021	7.6%	2.4%	2.1%
	2016	6.9%	2.2%	2.1%
Premium density per capita (US\$)	2021	2,232	213	238
	2016	1,749	174	181
Loss ratio	2021	65%	66%	71%
	2016	60%	67%	72%
Expense ratio	2021	31%	28%	30%
	2016	33%	28%	33%
Combined ratio	2021	96%	94%	101%
	2016	93%	95%	104%

Life and health

		Americas	Europe, Middle East, India, Africa (EMEIA)	Asia-Pacific
Gross written premium (US\$b)	2021	740	1,225	1,033
	2016	633	943	939
	Five-year CAGR	3.2%	5.4%	1.9%
Penetration (% of GDP)	2021	2.4%	3.3%	3.3%
	2016	2.5%	3.1%	3.9%
Premium density per capita (US\$)	2021	721	291	363
	2016	640	239	341
Operating margin	2021	23%	7%	9%
	2016	27%	7%	9%
Cost ratio	2021	26%	12%	21%
	2016	29%	12%	22%

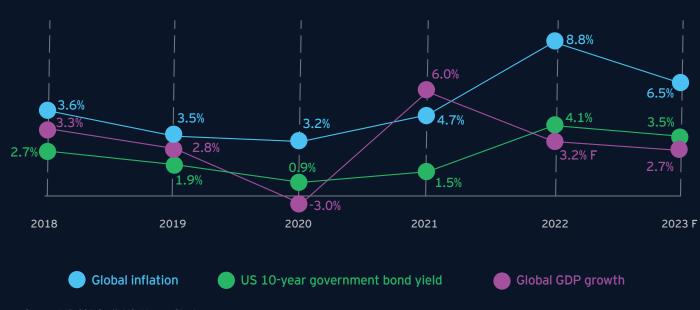
Source: EY analysis; Swiss Re

An uncertain and turbulent macroeconomic and geopolitical landscape

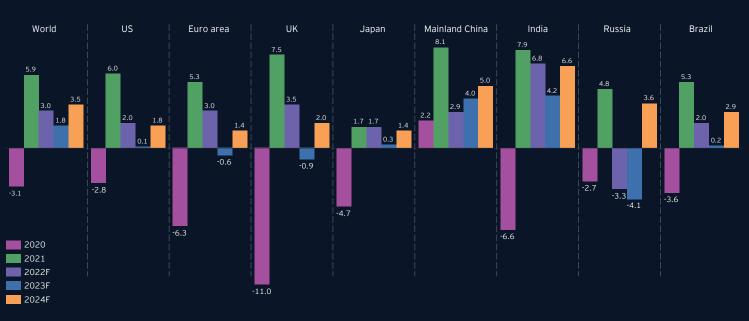
From war and natural catastrophes, to volatile markets and broken supply chains, the industry faces a unique and complex matrix of risks. While achieving business resilience is the first goal for insurers, advancing on their transformation journeys will help them navigate the economic downturn.

Challenging economic conditions and rising geopolitical tensions have forced business executives to pay attention to the decisions made by central banks around the world and political leaders in specific regions. While the industry held up relatively well in the wake of the pandemic and in the early stages of economic disruption, challenges will persist, with different effects on different lines of business.

The insurance market has gone from low inflation, low interest rates and integrated global markets to rising inflation, higher interest rates and increased protectionism. Many of the most profound changes have occurred seemingly overnight. But, despite the formidable headwinds, insurers can't afford to automatically retrench or delay their ongoing transformation programs. The global economic deceleration is broad-based as the common challenges of elevated inflation, surging interest rates and weakening labor market conditions weigh on activity.



Source: IMF, S&P Capital IQ, Morgan Stanley



Year-on-year percent change in real GDP 2019-23F

Source: IMF; OEF; EY-Parthenon

The fight against inflation: Central bankers have been focused on taming inflation, in keeping with their mission. While global economic activity is slowing and the outlook remains uncertain, the desire to front-load rate hikes and exit a highly accommodative stance remains strong, even if this brings pain to households and businesses. Though different jurisdictions may have slightly different rationales, central bankers are committed to reducing demand and lowering inflation even if their actions cause pain in the form of below-potential growth and a higher unemployment rate.

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Beyond the increase in the cost of debt for both households and businesses from inflation and interest rate hikes, there's another channel that needs monitoring. Financial conditions – which include stock prices, corporate bond yields, treasury bond yields, the value of the dollar and volatility – have tightened significantly since the start of the year. By the end of 2022, financial conditions will be at their tightest over the past 25 years, outside of recessions, representing a notable headwind to business investment and hiring.

Gregory Daco

EY-Parthenon Chief Economist, Strategy and Transactions, Ernst & Young LLP

More EY-Parthenon macroeconomics insights >

Year-on-year percentage point change in policy interest rate September 2021 to September 2022



Source: Central banks of shown nations; EY-Parthenon

Looking ahead, core inflation is projected to start cooling in 2023. That acceleration will result from weaker global activity, a housing market correction in various regions, easing supply chain strains, further tightening of monetary policy around the world and the deflationary effects of a likely global recession. In this environment, insurers will need to carefully monitor consumer and business purchasing trends, as well as financial conditions.

Inflation will have varying impacts across the industry. Inflationdriven increases in claims costs (e.g., repairs, replacement parts, labor) will be a particular problem for property and casualty (P&C) insurers in the US, where regulators have been turning down rate increases. Commercial carriers have been able to pass along rate increases more consistently. Life insurers are cautiously optimistic as higher interest rates today fuel future profitability and seem to outweigh the impact of inflation.

In the Asia-Pacific region, the short-tailed nature of insurance products in many markets gives insurers increased ability to reprice policies quickly, thus correcting for inflation and partially compensating for depleted reserves. Firms that outsource key parts of the value chain (e.g., investment management, IT services) will certainly feel an additional pinch.

A recession by any other name: Throughout much of 2022, the biggest question on the minds of senior business leaders and economists was: "Are we in a recession or not?". The precise answer is less important than the structural challenges caused by the potent mix of surging inflation, rising interest rates, slowing growth and volatility in capital markets.

A global recession appears likely, even though labor markets in the US and around the world remain quite tight. The economic downturn will play out differently in different markets because of the divergent nature of inflation, supply constraints, consumer demand and monetary policy.

But there is broad concern across markets that at some point the economic slowdown will cause customers of all types to reduce their coverage or stop buying altogether. Higher costs for food, housing, energy, and other goods and services will almost certainly lead to higher churn rates. The impact and opportunities for insurers: This isn't the first inflationary environment the insurance industry has had to navigate, but it is shaping up to be one of the most difficult. While inflation and recession will hurt insurers in the form of higher claims costs and reduced demand, higher interest rates may provide an earnings tailwind, thanks to improved investment returns. But those returns will require brave decision making, careful hedging and timely refinements to asset and liability management (ALM) policies.

Certainly, some insurers will look to optimize their asset allocations and diversify portfolios for lower risk and stronger returns. Investment teams will need to strike a fine balance, as asset mismatches and sub-optimal hedging will be exposed to interest rate movements, which could impact profit margin and, if the cost of guarantees moves in an unexpected manner, capital reserves. The bottom line is that insurers will need to monitor a range of metrics, including liquidity and asset valuations, and be prepared to adjust ALM policies in line with market developments.

Non-life insurers will realize the positive effects on investment income more quickly since they maintain relatively short-duration portfolios. But if interest rates remain high, long-term returns will also improve as bond portfolios gradually roll over into higher yields. Some insurers will look to take advantage of high interest rates by moving to highyield bonds.

127%

Net investment income as a percentage of net income, top 50 listed US insurers, 2017-21 Source: EY analysis

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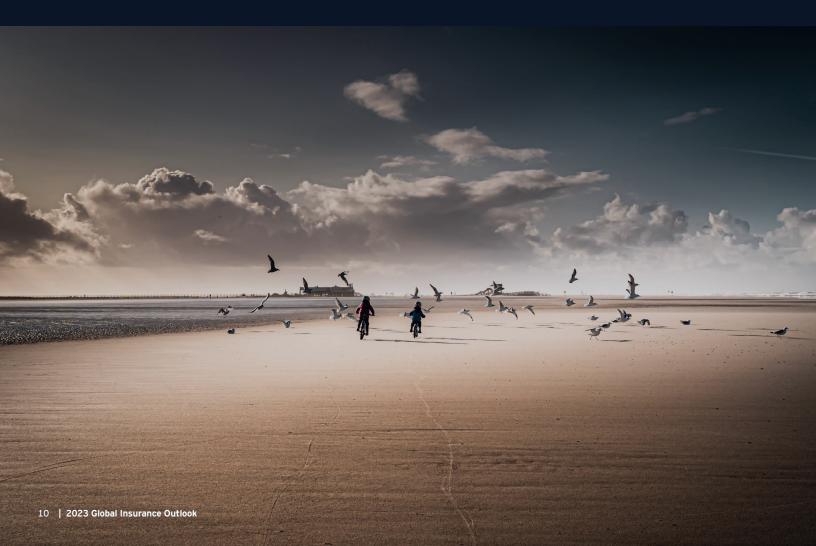
Rising rates will also improve returns on in-force business and provide flexibility in underwriting new business. More attractive product terms (e.g., higher crediting rates, lower rider fees) for savings and annuities products will be critical. Private equity interest in buying closed blocks of business may decrease because of the rising price tags. Some life insurers might even decide to buy back books of businesses they sold in recent years.

Life insurers will also benefit from the discounted values of liabilities and, if interest rates remain high for the long-term, the rising interest in guaranteed income products will spike higher still. Recent sales trends in some parts of the US suggest just how quickly these products became attractive to consumers again. Falling asset values are less of an issue for companies with large, unit-linked businesses, where policyholders hold more of the downside risk. However, the likely outflows of customers moving into guaranteed income products, which require more solvency capital, must also be taken into account.

The hit on demand and retention could also be significant, with more consumers lowering coverages, increasing deductibles or deciding they can no longer afford insurance. Some competitors may increase guarantees to gain market share despite the volatility. Senior leaders will also monitor social inflation costs and judicial awards. These risks are hard to measure, since they are not part of the consumer price index (CPI), and thus difficult to pass on to customers. Still insurers will need to adjust their pricing, how and where they can in the event of excessive volatility.

Large insurers should also carefully watch the developments in the InsurTech market, which has been a source of both competition and innovation. Significant drops in InsurTech valuations may open up new acquisition and partnership opportunities. As a whole the stock prices of listed US InsurTechs are down 80% to 95% from their all-time highs. Layoffs are also taking place in what was recently the hottest and most dynamic sub-sector of the insurance industry.

InsurTech funding -41% 1H22: US\$4.8 billion 1H21: US\$8.2 billion Source: CB Insights



A high-risk, high-volatility geopolitical landscape: Geopolitical tensions have risen considerably during the last few years. US-China tensions and the emergence of regional powers highlight the shift from a unipolar to a multipolar world. Rising populism and nationalism have weakened some governments and led others to take greater control over their economies. The COVID-19 pandemic and the war in Ukraine, the most significant change in geopolitical relations since the Cold War, accelerated these trends and raised the stakes, both politically and economically. The result for business leaders is the increased consideration of geopolitical factors in strategic decision-making and resource allocation.

"War exclusions" may limit claims losses, though that is far from certain, especially relative to cyber and policies designed to cover political risk. Marine, aviation and transit (MAT) lines of businesses have felt the greatest impacts in terms of price increases. Underwriting for political risk and trade credit insurance has become more cautious. Increasing volumes of state-sponsored cyber attacks are another major risk vector that senior insurance leaders are monitoring, largely because their commercial customers may be collateral damage in cyber warfare.

The long-term impacts of economic sanctions on Russia also present uncertainty, as do the threat of significant shortfalls in grain, oil and other commodities essential to the global economy. Insurers will be confronted with these risks for some time to come as a rapid de-escalation of the war in Ukraine looks unlikely and the risk of broader NATO involvement cannot be discounted.

Ongoing hostilities will cause further supply chain disruptions and produce structurally higher prices. Second-order impacts will continue to trickle through to the global economy, undercutting growth and maintaining upward pressure on commodity prices.

More broadly, reduced trust among major economies has led to reduced cooperation, with countries and regions prioritizing their self-interests over the collaboration necessary for broader economic growth. The decades-long trend toward globalization has slowed significantly. That is not good news for global carriers that specialize in large commercial trade and reinsurance, though it is less of a concern for insurers focused on domestic P&C markets.

US\$35 billion

Estimated specialty insurance claims from the war in Ukraine Source: S&P Global

Such cooperation is necessary to address the world's biggest threats. The sense of urgency around climate change has increased significantly in some segments of the private sector. However, wars, inflation and other unexpected crises prevent the kind of breakthrough progress that is necessary to protect individuals, businesses and communities against the greatest climate risks. More collaboration is required - among the public and private sectors and among countries - on an unprecedented scale. The benefits of such extensive collaboration are not yet being realized.

Volatility will be with us through 2023. The need for governments and regulators to address a matrix of complex issues, including energy security, environmental, social and governance (ESG) goals, inflation and access to critical resources and supplies will complicate the operating environment for international firms. That's especially true for firms that operate across opposing geopolitical blocs. It is not difficult to imagine prominent firms exiting some foreign markets, or prioritizing opportunities within their home markets.

While geopolitical risks are ultimately out of the hands of insurance executives, there is much they can do to position their companies to seize opportunities in a volatile and uncertain environment. First and foremost, they can model their risk exposures in markets most likely to experience geopolitical turmoil and examine the impact of sanctions. They must also prepare to work with their largest global and multinational corporate customers, which will be looking for fresh thinking and strategic advisors as their needs evolve. Broader and more detailed scenario analysis (e.g., supply chain disruption, commodity shortages, new armed conflicts, increased social unrest) is also necessary to navigate the turbulent times ahead.

Imperative actions for insurers

- Model the impact of inflation and recession using a range of metrics (e.g., claims and labor costs, customer demand, consumer prices, demand-led factors, systemic indicators, stock prices).
- Develop multiple macroeconomic and geopolitical scenarios for 2023-24, incorporating China and all major global markets, with a broad range of assumptions to get ahead of unexpected developments and unintended consequences.
- Monitor liquidity and asset valuations to inform hedging strategies and refinements to ALM policies.
- Be vigilant in tracking leading indicators of further economic deterioration and prepare to move quickly in response, particularly in adjusting underwriting approaches.
- Rebalance and diversify the investment portfolio, with the goal of moving to higher-yielding assets.
- Track the potential impact of worsening US-China relations, intensifying hostilities in Ukraine and other potential global hot spots.
- Re-evaluate the valuation of assets based on rising costs and reset policy limits to reflect higher replacement and labor costs.
- Develop more attractive product terms for life and annuities products.
- Evaluate partnership and acquisition opportunities based on declining valuations for InsurTechs and currency fluctuations that may create a buyer's market in some regions.



The protection gap as a trillion-dollar opportunity

People and businesses have far less protection than they need against proliferating and intensifying risks, including climate and cyber. Demographic shifts and changes in the social contract have added to the huge shortfall in health insurance coverage.

The recessionary environment is not helping the huge and steadily growing worldwide protection gap. In fact, the gap – incorporating climate and cyber protection, as well as retirement savings and life and health insurance – is only going to widen. Demographic trends, especially increased longevity, also point to a bigger gap.

As is often the case in the insurance industry, the biggest challenges present the most compelling opportunities. In the wake of the pandemic, social unrest and more natural disasters, consumers and companies have never been more aware of their need for protection. From that perspective, the protection gap represents an opportunity to bring in a great deal more revenue, perhaps as much as US\$1 trillion more, and to gain billions in profits.

US\$1.4 trillion

Global insurance protection gap, 2021

2x

Growth in the gap since 2000 Source: Swiss Re Institute Closing the gap will require insurers to think and act differently - launching new products and services in new ways, with new underwriting models and via new distribution channels. In other words, insurers that continue to focus exclusively on the risks they've always written profitably will not only miss out on the huge potential upside, but also contribute to the expanding gap.

For insurers to seize the opportunity, they must address longstanding barriers on both sides of the business:

- Demand: affordability, awareness, appeal, trust
- Supply: transaction costs, adverse selection, insurability limits

Further, insurers must assess individual opportunities relative to several large key risk pools, representing two of the three pillars of ESG:

- Environmental catastrophes and climate risk
- Social risks, including health care and mortality

Along with cyber risk, these are all issues too large and complex for the insurance industry to address on its own. Though public-private partnerships will be necessary where insurability is too expensive or impossible, insurers should develop solutions proactively. Taking action now can help insurers prepare for the unlikely event that government authorities will ask them to take on more responsibility for covering cyber or climate risks in the future.

US\$60 billion to US\$80 billion

Potential increase in annual industry profits if it narrows the protection gap

Source: Swiss Re Institute

Bupa focuses on the health insurance gap in Asia

Rising customer expectations is a primary cause of the health care insurance gap in the Asia-Pacific region. Most consumers are looking for offerings that empower them to make good decisions and improve their health. But their insurance options are limited today, according to Gerald Marion, Chief Customer and Strategy Officer at Bupa Asia Pacific. "Many customers feel the benefits of insurance are insufficient in comparison to the price," he said. "Some customers who can afford to buy coverage choose to pay the tax penalty for not having it."

In some markets, there are legislative barriers to some coverages (e.g., primary care visits), though consumers are likely to fault insurers for these gaps. "For other allied health services, we have negotiated no-gap schemes for our members," said Marion. "Thus, customers are happy."

Bupa is working to educate consumers on the benefits of health insurance, and the risks of not having it. They are also working to be fully transparent about what is covered. Such moves are necessary to raise the level of trust in insurers, which is low across the region. Marion believes governments can help in education and trust-building.

The company is also creating stronger medical networks catering to customer needs, with more choices and a "no-gap" experience. Looking forward, technology advancements and increased data sharing among regulators, insurers, employers, pharmaceutical companies, health care providers, banks and other stakeholders will drive change. Bupa takes a "portfolio and options approach," working to optimize the existing model while placing strategic bets on emerging models.

"For customers who can't afford coverage, there is a question of equity that needs to be addressed," added Marion. "The challenge for health insurers is to create customer advocacy, based on better value and more extensive education, which will augment trust."

The untenable environmental outlook - and how innovation can mitigate the risks

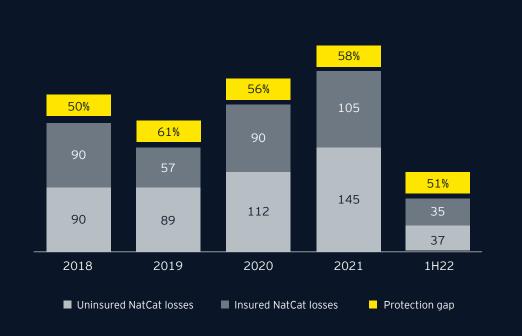
The severity of climate change seems more real every day, thanks to a steady drumbeat of bad news. Storms, floods and wildfires of almost unimaginable severity have become routine occurrences. The increased frequency and severity of natural catastrophes (NatCat) combined with surging inflation have created a huge coverage gap. The gap will only increase because many insurers have already announced that they will reduce their NatCat exposures due to the volatility and likelihood of rising claims costs.

During the last five years, uninsured losses have exceeded the hundreds of billions of claims paid out by insurers. Of the six years with the highest catastrophic losses since 2000, four have occurred since 2017. With more people concentrated in high-risk areas, these NatCat losses will continue to grow. It's an understatement to say the situation is unsustainable.

As difficult as it will be to address these environmental challenges, the industry has little choice but to take action and, ideally, exert leadership. A recent EY survey of insurance chief risk officers (CROs) in the Europe, Middle East, India and Africa (EMEIA) region found that climate risks are their top priority for the next year. But, while CROs and other senior insurance leaders are focused on climate risks, business executives across other sectors no longer share the same sense of urgency, according to the World Economic Forum's 2022 Executive Opinion Survey. Respondents in both advanced and emerging economies ranked more immediate-term issues, including potential debt crises, as greater risk concerns.

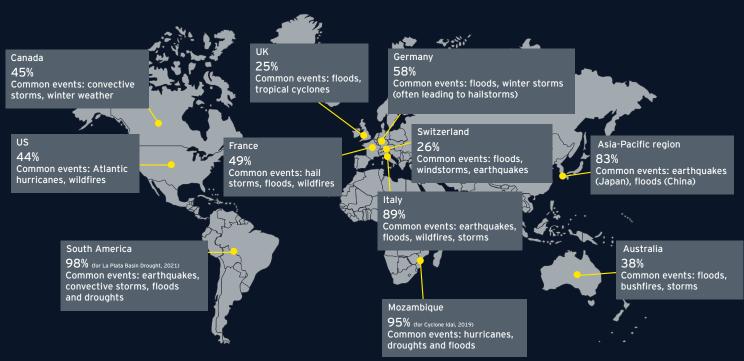
There is no doubt that geopolitical developments are a factor here. Consider how even industry leaders that have made bold environmental commitments – up to restricting coverages for fossil-fuel companies and other brown organizations – recognize the need to reactivate coal energy in some European countries to avoid shutdowns or huge price spikes.

The unique challenges climate change presents to the industry also demand action. Affecting both assets and liabilities, climate risks are very difficult to model and extend across long time horizons. These complexities underscore the need for bold and creative solutions - including efficient risk capital, risk transfer and risk syndication strategies - to spread risk around and expand coverages. The industry is responding with innovative solutions, with different markets adopting varying approaches around the world. See sidebar



Total economic losses due to natural catastrophes (US\$b), 2018-22 HY

The worldwide natural catastrophe protection gap, 2011-21



Source: Swiss Re, Aon, Swiss Re Sigma Explorer, Geneva Association

Estimated losses from recent climate events

Hurricane Ian, 2022 US Total: US\$100 billion Insured: US\$42 billion-US\$63 billion

Source: S&P Global Market Intelligence

Hurricane Dorine, 2019 The Bahamas

Total: US\$7 billion Insured: US\$2.8 billion-US\$4.9 billion

Source: Karen Clark & Company

Hailstorms, June/July 2022 France

Insured: €4 billion

Source: Munich Re

Storm Bernd, 2021 Germany and Belgium

Insured: US\$13 billion

Henan floods, 2021 China

Total: US\$18.6 billion

Proportion of losses that were insured:

10%

Number of claims filed:

552,000

Source: AON

Approaches to manage NatCat risk

In France, insurers cooperate with the public sector to address risk transfer and finance projects to reduce disaster risk via the non-profit **French Association for Natural Disaster Risk Reduction** (AFPCN). Established in 2001, the AFPCN promotes dialogue among various stakeholders and the sharing of leading practices, data and research.

Spain and Austria also have mature and cost-effective climate insurance schemes, including multi-peril policies and substantial premium subsidies. In both countries, one entity - **a mutual insurance company in Austria**, a **co-insurance pool in Spain** - provides coverage in support of more effective agricultural risk management.

In the UK, **Flood Re** is a collaborative scheme between the government and the insurance industry designed to make flood coverages affordable for property owners in high-risk areas. While insurers can still set their own premiums, reinsurance costs are capped by the property's local tax rates.

The **Caribbean Catastrophe Risk Insurance Facility** (CCRIF) was established in 2007, as the first multi-country risk pool for Caribbean governments to help limit the impact of natural catastrophes. Starting in 2014, the organization expanded into new product lines and geographies, including Central America, with parametric policies for earthquakes, tropical cyclones and excess rainfall. Since its inception, CCRIF has made more than 50 pay-outs worth US\$250 million.

Established by the African Union in 2012, the **African Risk Capacity** (ARC) offers parametric and weather index-based products to sovereign governments in Africa. The agency operates as a sovereign catastrophe insurance pool. In 2015, it began offering insurance to international organizations (e.g., the United Nations, non-governmental organizations), with the aim of doubling its existing coverages. ARC has provided insurance worth US\$660 million in its decade of existence, according to the World Economic Forum.

The **Pacific Catastrophe Risk Insurance Company** (PCRIC), founded in 2016, is a captive insurer of the Pacific Catastrophe Risk Insurance Foundation (PCRIF) and a specialist provider of disaster risk financing services to Pacific Islands nations. Its product portfolio includes parametric products for cyclones and earthquakes. For its models, the PCRIC uses satellite imagery, topographic maps and other geographic data. The US, the UK, Germany, Japan and other developed nations provided the initial capital through InsuResilience, the G7 initiative on climate risk insurance.

The **Southeast Asia Disaster Risk and Insurance Facility** was formed in 2019, and is completely owned by the member countries (Cambodia, Indonesia, Lao PDR, Myanmar, the Philippines, Japan, Vietnam and Singapore). The regional parametric insurance uses a Flood Risk Monitoring Tool leveraging satellite, meteorological and hydrological data to assess flood impact and release pay-outs based on the trigger events.





How climate change exacerbates other risks: With extreme weather patterns becoming more regular and the war in Ukraine grinding on, the food security of millions of people is at risk and a food crisis is possible. Insurance solutions (e.g., multi-peril crop insurance, parametric insurance for crops and livestock) for agriculture can help prevent such a crisis.

Advanced technology holds the key to innovate in the face of these new risks. Al and modeling tools can link index insurance with traditional mechanisms to reduce risk or digitize loan mechanisms. Predictive tools can provide policyholders with advance notifications of seasonal weather patterns and potential storms.

Insurers can take the lead in educating society about the risks of climate change, starting with their individual and commercial customers. Just as they have enhanced their life and health policies with services that promote healthier living, insurers can provide tools, content and other resources to help people, businesses and communities adopt greener behaviors. With more consumers aware of and making purchasing decisions based on companies' commitments to environmental, social and governance (ESG) issues, these efforts have more to do with performance than public relations. 22%

Potential savings for taxpayers and governments by increasing climaterelated insurance coverage by 1% Source: Lloyd's

9%

Potential increase in market valuation for insurers that reduce coal underwriting and investments

Source: Societe Generale SA

79%

Consumers who consider insurers' commitments to environmental issues in purchasing decisions

59%

Consumers who are aware of companies' corporate social responsibility efforts

43%

Consumers who want to buy from companies that benefit society even if it costs more

Source: EY 2021 Global Insurance Consumer Survey

In France, Spain, the US, the UK and other markets, flood, wildfire and other climate risks are viewed as national security concerns. Some industry analysts have speculated that regulators could mandate that insurers play a larger role in covering these risks. While unlikely today, the prospect reinforces why insurers should be proactive in engaging all stakeholders to find new solutions.

Smoothing the transition to a green economy: Innovation will also catalyze the greening of the economy. Insurers can play a critical role by:

- Helping businesses of all types and emerging economies reduce carbon outputs
- Adjusting coverages for "brown" sectors and, ultimately, declining coverages
- Leading the development of public-private partnerships for renewable energy projects

The industry's role as investors should not be overlooked. With assets of more than US\$30 trillion, the industry can work with governments to fund resilient infrastructures to protect against natural disasters.

Insurers have a long history of mitigating risk in innovative ways, including catastrophe bonds and weather insurance. Lessons from these past ventures can be applied to mobilize capital in the service of innovation. Physical and business risk insurance for investors in solar photovoltaic plants and other innovative technologies can provide extraordinary benefits to society, as well as strengthening the bottom lines of leading insurers.

The massive cyber coverage gap – and what insurers can do to bridge it

Researchers are challenged to quantify the coverage gap for cyber risks, given the lack of historical claims data and the difficulties in calculating the costs of cyber incidents. But there is widespread consensus that current policies cover only a small fraction of the potential risks.

As with climate change, cyber risk is an issue too big for the insurance industry alone, though insurers can engage with regulators and government authorities to find solutions that benefit not just individuals and businesses, but also the economy as a whole.

The risks are as great as they are today largely because cyber crime is incredibly lucrative. Research from Munich Re cited the agility and "professionalism" of criminal organizations as the primary reason they earn more than global drug traffickers. State-sponsored cyber attacks are also on the rise and grow ever more sophisticated.

Remote and hybrid working have opened up new vulnerabilities. Many small and mid-size enterprises (SMEs) do not have cyber insurance because they don't think they are likely targets for a cyber attack. The high cost is another barrier to adoption. The need to cut costs was the leading reason why UK-based SMEs cancelled cyber policies in 2021, according to GlobalData's 2021 UK SME Insurance Survey. That's not surprising given steep increases in the price of cyber insurance in 2022; according to Gallagher, the prices climbed an average of 37%, with some firms being hit with increases of up to 80%.

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There is a looming sense of risk because boards either do not understand cyber threats or are not confident enough that their organization is sufficiently well secured. This delta is the market for the insurance providers.

Dominic Fortescue

EY Cyber Security Partner, former UK Government Chief Security Officer

10% Estimated proportion of cyber risks that are insured Source: Munich Re



Cost of ransomware attacks to businesses

2031:	US\$265	billion
2021:	US\$20	billion

Source: Cybersecurity Venture

As important as cyber insurance policies are, they are not a substitute for investing in cyber security and risk management, and insurers can help companies take a more informed and proactive approach by:

- Increasing awareness about exposure
- Sharing risk management expertise
- Encouraging investment in risk reduction
- Facilitating robust responses to cyber incidents

Given the far-reaching impact of cyber across the business, it's no surprise that in the latest EY survey of EMEIA insurance CROs, respondents chose cyber risk as the most challenging skill to recruit or retain, ahead of climate and sustainability and data and analytics.

Collectively, these factors result in the looming sense of risk that board directors and senior leaders feel. In some cases, they struggle to fully understand the risk; in others, there is a lack of confidence in existing protections or lack of a clear plan for the future. That gap represents a sizable market opportunity for the insurance industry.



Rethinking social risks with new solutions tailored to rising demand

With millions of excess deaths worldwide, the pandemic spotlighted the mortality gap, which refers to the difference between the amount of life insurance people carry and the amount they need. It also caused a large spike in demand for life insurance.

According to the EY Global Insurance Consumer Survey, 61% of people in emerging markets showed interest in purchasing life insurance since the pandemic, compared with 22% in developed markets. This is a huge new customer segment that insurers have struggled to engage in the past.

The pandemic also led to increased consumer interest in solutions for greater financial well-being. While many across regions have enjoyed the benefit of increased economic output, not enough consideration has been given to how to protect that increased wealth.

The institutional and legal complexities of health care systems around the world, as well as the huge differences in the quality and availability of health care services, make it difficult to estimate the health insurance gap. The good news is that increased government spending on public health during the pandemic appears to have helped narrow the gap by 4.3% in 2021, according to Swiss Re, though the gap is expected to increase in 2022 to 2023, due to macroeconomic challenges and rising inflation.

73% Consumers citing financial well-being as a concern

Source: EY 2021 Global Insurance Consumer Survey

US\$737 billion

Global health protection gap

Source: Swiss Re

SCOR addresses the protection gap via deep insights

The growing insurance protection gap is an area of concern for insurers. SCOR, a leading global reinsurer, has directly linked its operating strategy and corporate purpose to the gap. The company is seeking to engage underserved market segments, including low-income consumers.

The company tracks the protection gap closely, utilizing data from regulatory bodies and industry analysts and uses nonfinancial metrics (e.g., the number of policyholders who were previously not insured, insurance penetration rates in different markets) to inform its strategies, evaluate its growth prospects and assess its performance.

Low levels of insurance literacy is part of the problem. In its most recent global study of 12,000 consumers, SCOR found that people often don't buy insurance because they don't understand it. "The industry has failed to communicate the value it offers," said Frieder Knuepling, SCOR's CEO of Life and Health business. This year, SCOR graded survey respondents based on their basic knowledge of insurance. The global average was 6.25 out of 10, with consumers in India scoring the lowest (4.41) and those in Ireland the highest (7.26).

While financial literacy is important, product innovation is also necessary. To address underserved markets and lower-income consumers, SCOR is working with new players to develop coverages with lower sums assured and a simpler sales and onboarding process.

SCOR also seeks partners outside the insurance ecosystem to engage and build trust with customers. The company has developed a diabetes product with a digital health platform for life insurance carriers and policyholders in the US. This joint effort between SCOR, Bayer Pharmaceuticals and One Drop empowers individuals to proactively manage their health and reduce the risk of serious complications from medical conditions.

"The best partnerships are truly collaborative and based on data and knowledge sharing," said Knuepling. "But the most important determinant is to align on purpose to solve a common problem." In SCOR's case, that purpose is to increase access to coverage and facilitate prevention. More partnerships focused on these goals will help the insurance industry significantly reduce the protection gap.



Governments, regulators, insurers and employers of all types and sizes must collaborate to address the barriers that limit adoption of health insurance. In emerging economies, there is relatively low awareness of how insurance can help boost economic output. Insurers can work with governments to demonstrate the value of life insurance and retirement savings to deliver financial security and resilience.

The expanding insurance gaps in more mature economies underscore the need for more cost-efficient and personalized solutions and alternative products. Consumers want not just protections but also tools that make it easier to save money, set financial goals, make better financial decisions and increase access to health care. Alenabled tools can provide notifications and prompts to consumers to help them achieve their goals. Insurers must also use these technologies for fair and unbiased pricing decisions. As a first step, insurers should comment on the supervisory statement issued by the European Insurance and Occupational Pensions Authority (EIOPA) and engage with that group as it seeks to develop industry standards for differential pricing.

Embedded insurance has proven itself effective in distributing insurance services efficiently. Life insurance and annuities are increasingly embedded in employee benefit and group insurance plans. Embedded insurance won't solve the protection gap on its own, but it can spark wider business model transformation.

The size of the insurance gap necessitates fresh thinking and new tactics. The industry needs to harness the most powerful technologies to gather and analyze data, quantify difficult-tomeasure risks (e.g., flooding) and communicate with customers, regulators and other stakeholders in the most effective ways. Insurers that see bridging these coverage gaps as a critical growth opportunity must expand their view beyond underwriting familiar risks and conducting familiar transactions.

As compelling as the growth upside is, insurers must not lose sight of the bigger picture. By addressing the protection gap, insurers can live their noble purpose of protecting individuals, businesses and communities against the most severe threats. In other words, this is a classic case of doing well by doing good.

The societal value of health insurance (and insurance innovation)

From a societal perspective, life and health insurers can support public health systems with limited resources by providing private financing, especially for the growing middle class. For individual customers, simple, affordable health insurance provides a foundation for financial resilience.

From that baseline, however, insurers can deliver even more societal value by shifting their value propositions toward prevention and wellness. Behavioral platforms and apps that encourage customers to lead healthier and more active lives will ultimately yield greater benefits than simply providing financial coverage to pay illness claims. We believe it will be better for the insurance business, too. While first-movers and early adopters have already experienced considerable success with holistic health and wellness programs, we believe there is a great deal of value still to be produced.

Innovation under way

Mitsui Sumitomo Insurance, ReMark Japan and MEDRiNG, a Japanese health care start-up, are jointly developing a solution to promote health in Vietnam. The solution includes tailored, data-driven medical insurance based on data from medical clinic visits. An AI-based disease risk prediction engine can provide early detection of morbidity risks. The Good Life mobile app guides customers' physical activities and grants rewards to those who meet fitness goals.

Fujitsu and Salesforce are collaborating to develop new digital insurance solutions in Japan. The two companies are cooperating with insurers and medical institutions to enhance disease risk assessments based on Al-driven analysis of a wide range of integrated health care data, including electronic medical records. The end goal is more connected health care, with optimized insurance products based on greater visibility into individuals' disease risks and with coverage for prevention, diagnosis, treatment and prognosis.

Imperative actions for insurers

- Educate the public about the size of the protection gap and the threat it poses, as well as the value of insurance and the industry's historical purpose.
- Align the organizational purpose to innovation plans, new product development and growth strategies and communicate that purpose frequently and persuasively to the market.
- Actively engage with regulators, industry groups and other stakeholders to promote development of solutions for climate risk and other large-scale risks.
- Develop tailored product offerings to address the retirement savings and health protection gaps for specific customer segments.
- Engage with industry groups to refine and drive adoption of insurance-specific performance indicators and reporting standards for ESG and long-term value.
- Eliminate unnecessary steps in application and sales processes and simplify product structures to make them easier to find, evaluate and buy.
- Retool underwriting processes and criteria to design and price policies for commercial customers transitioning to lower-carbon operations.



The business case for new business models and value propositions

The path to growth starts with new solutions that build on fundamental protections to deliver more value to customers facing new risks.

Even if the protection gap didn't exist, insurers would have ample reason to develop new value propositions to execute their growth strategies, including:

- Shifting customer needs in every line of business
- Increased awareness of unexpected risks and threats
- Intensifying competition from non-traditional players
- Ongoing industry convergence within financial services
- Regulatory developments, including increased emphasis on open insurance
- The rise of embedded insurance
- The expectations of capital markets

All of these factors, which are simultaneously growth opportunities and competitive threats, should provide motivation for insurers to develop new solutions, many of which will be designed to reduce the protection gap. But innovation in the coming era of insurance will not just be about what products insurers sell, but rather the value they provide and the business models they adopt to create that value. New value propositions and business models will vary by lines of business. In life insurance, financial well-being is what customers want, which means insurers must serve as advisors, providing credible guidance and options to help insureds meet their goals. In non-life lines, with more protection being delivered automatically via embedded and usage-based offerings, the quality of the service and overall experience becomes much more important than the risk transfer itself. For some P&C customers, insurers will provide access to human agents and advisors, but personalized and digitally enabled apps, platforms and experiences will be the focal point for the vast majority of interactions.

Insurance leaders clearly understand the importance of delivering what the market wants

In the biannual EY Tech Horizon survey of insurance industry CIOs, respondents chose "meeting changing customer demands" and "improving the quality of products and services" as the top two objectives for their transformation programs. In other words, they have a clear and worthwhile direction for their transformation journeys.

Smile gets emotional about insurance

Switzerland's Smile Insurance, an online arm of the Helvetia Group, has been in business for nearly three decades. But in the last four years, the company has remade itself with an innovative business model that's led to double-digit premium growth with an average profitability of 90% over the last few years, as well as entry into new markets and a doubling of its overall business.

According to CEO Pierangelo Campopiano, a willingness to "break unwritten rules" has been key to the company's success. Four years ago, Smile was a simple online platform for customers to obtain quotes and buy policies. The company then started offering insurance subscription models that could be renewed or cancelled on a monthly basis through a mobile app. Further, it was the first Swiss insurance company to offer payment via credit card for auto insurance. These experiences caused Smile to be labeled "the Netflix of insurance," said Campopiano. "First and foremost, I think of Smile as a digital lifestyle company that provides insurance."

The industry's first freemium offering provides complimentary services to potential customers ready to engage with Smile but not yet ready to buy full coverage. Using the principles of gamification and community building, an app-based rewards program lets users earn points for safe driving, access free protections for online shopping and profit from special offerings from Smile's ecosystem partners. The objective of the freemium model is to build relationships; when users are ready to buy auto, home or other insurance, Smile will be top of mind.

Meeting customers along their individual lifestyles forms the heart of Smile's "service to sales" strategy. "Focusing on user and customer needs, instead of a technical product, creates an emotional connection," said Campopiano. "Rather than our value proposition, we prefer to manage our value perception; we want customers to perceive Smile as delivering the value they want."

Data-driven capabilities are essential to execute the service to sales strategy. One challenge the industry faces is that insurance stakeholders (including agents and brokers) are isolated data hubs, which makes it hard for some insurers to identify their own customers. Along with its strong mobile-first focus, Smile has built a single source of data over the Smile App, so users are instantly recognizable if they contact Smile for a quote. The information at hand can also be used to shape an outstanding digital experience.

Partnering has also been critical. Smile is the only official insurance partner of Mastercard and has also partnered with many Swiss FinTechs, building successful mobile bancassurance solutions. With 180,000 customers in Switzerland and Austria, 100%-digital operations and a rich customer experience, Smile is well positioned for further growth, even in a turbulent market.



Innovating for tomorrow's customer base

One innovation priority should be to meet tomorrow's customers where they are today. Because younger consumers tend to trust people more than brands, insurers must adopt fresh thinking and new approaches. Even market leaders may need to develop all-digital "New Cos" if younger people view well-known names as liabilities.

Similarly, insurers must seek to engage through influencers, social media and non-traditional channels, sharing appropriate messages that reflect the value and sensibilities of the different targets. Getting it right will require research and a deep understanding of micro-communities. Products must reflect the lifestyles of people in their 20s who are just starting their careers. Old-school policies and distribution networks obviously won't work for digital natives who always buy direct but don't own their homes or vehicles. Partnerships with InsurTechs, popular retailers and large employers to support embedded insurance offerings may prove effective for connecting with Generation Z and Millennials.

Thinking beyond policies and protections

Tomorrow's top-selling insurance solutions will integrate protection with risk prevention and other value-adding services. That's true because consumers are more interested in reducing their risks than in managing their losses. Customers will access, buy and modify tomorrow's insurance offerings in new ways, via more flexible distribution, engagement and service models. Insurance will be available in more forms and in more places than ever before, including in the metaverse, on e-commerce sites and at the point of purchase in nearly every retail environment imaginable.

How insurers create their solutions will also change. Co-creation with partners and collaborators - banks, asset managers and other financial institutions, FinTechs, tech platforms, software providers, manufacturers - will become much more common. Product design will shift from a standalone process to an integrated capability, with internal "factories" using modular components (e.g., language and limits) as a foundation and additional features (e.g., risk prevention content services) enabled by continuously connected real-time data flows. Actuarial innovations, which often appealed to agents more than customers and made policies harder to understand, will help promote holistic and personalized experiences. To align their offerings to consumer needs, insurers will need to develop more robust data management systems and analytics to allow for efficient, continuous information sharing.

The end goal will be to ensure that every product is designed so that customers get the protection they need at a fair price, with ancillary tools and services that help them identify and manage changing risks. In some cases, those changes will be made in real time; in nearly all cases, coverages will be adjustable much more frequently than annual renewal cycles.

Insurance will begin to function more like offerings from other industries, including those that have trained consumers to expect easily customized products. Today, many insurers have the data to tailor their offerings based on specific customer risks and needs. Tomorrow, most will put that data to work in personalizing products and enriching services.



Innovation in the era of ecosystems

Ecosystems are a controversial topic for some in the industry, because of the perceived risk of brand dilution and loss of customer relationships. However, in an increasingly fragmented market, business models built on core competencies and focused specialization and extended via partnerships may prove more profitable than traditional, "do-everything-ourselves" brand-centric plays. EY research bears out the point; in our 2021 ecosystem study, senior insurance leaders cited the following as the top four advantages of high-performing ecosystems:

- Entering new geographies: 60%
- Increasing efficiency/reducing cost: 57%
- Acquiring new customers: 51%
- Creating a new product: 51%

In the digital era, individual insurers are unlikely to deliver perfectly seamless experiences on their own. Rather, collaborations with other players via ecosystems will help insurers reinvent their products and services. Insurers that devise the right ecosystem strategies stand to benefit from better risk management, reduced claims and new sources of revenue. Wherever insurers stand in terms of developing those strategies, the market has already decided that ecosystems work, as evidenced by the huge gains in the embedded insurance market.

Estimated CAGR of embedded insurance markets, 2022-29

23.5%: US

25.0%: Latin America

21.6%: Asia-Pacific

19.4%: Europe

Source: Research and Markets

TONI partners to get to market sooner

Zurich-based TONI Digital develops white-labeled solutions for the insurance industry that reflect its mission of making insurance easy. "The insurance value proposition is changing profoundly and smart products that are easily accessible through digital channels will win the future," said Bernard El Hage, CEO at TONI.

The company focuses on three areas:

- Embedded and bundled products, such as bancassurance, which meet consumer needs for convenience
- Insurance sold by reliable brands a favorite retailer, for instance - which meet consumers' needs for trust
- Affordably priced products that can be bought in just a few clicks via direct digital channels which meet consumer needs for value and ease of use

The company's advanced technology platform and lean development process allow it to quickly develop and launch new solutions. TONI launched projects in bancassurance in less than a year together with Postfinance (motor insurance) and Migros Bank (risk life). "Banking and insurance go together naturally, yet traditional players struggle with combining them," said El Hage. "Customers prefer the convenience, so the response has been great, not surprisingly to us."

TONI has the necessary technical and legal know-how to help clients navigate common pitfalls (such as the lack of an insurance license). The company also partners with many different stakeholders, of all types and sizes. It fosters collaborations among business-to-consumer (B2C) firms seeking to offer insurance and traditional carriers that lack the resources to design new products in new channels. TONI's experience shows how having more players involved in a high-functioning ecosystem brings costs down and increases speed to market.

A clear understanding of customer needs drives its partnerships forward. "People want to buy insurance quickly and fully digitally, in the moment of need," said El Hage. "They don't mind buying insurance from a non-insurance company; they just want a trustworthy partner."

Cyber - where insurers can go from here

Cyber insurance is one of the few new products insurers have developed in the last few decades. From basic coverage for IT infrastructure, the offerings have evolved and expanded to include more sophisticated features and preventive services and ecosystembased solutions. Since initial "trial-and-error" approaches led to more losses than revenue, insurers have evolved and enhanced their offerings based on the constantly changing nature of threats and the increased demand from commercial customers.

They've also changed how they approach cyber, finding a better balance of protections and affordability. Leading insurers directly engage commercial customers to design tailored solutions that reflect unique operational structures, asset bases and threat profiles. These dialogues also benefit insurers in precisely defining coverages based on a range of potential outcomes (e.g., lost or corrupted data, operational disruption, damaged hardware). As both insurers and clients have learned a great deal about cyber risks and vulnerabilities, the engagement has become more strategic. Today, for instance, clients will want to know whether policies pay out if responsible parties or attackers cannot be identified with certainty.

Beyond working directly with clients, insurers have also engaged with more partners, including InsurTechs, to determine what works best in cyber. In the future, insurers may work directly with more cloud computing providers and major technology platforms to define coverages within well defined environments. Thanks to the emphasis on these partnerships and the strategic dialogue with clients, the evolution of cyber products presents a template for innovating with other types of solutions, including those designed to address climate risk and protection gaps.

However, cyber risks remain extremely difficult to assess. Those modeling challenges are due to the lack of relevant historical data, which is especially problematic given that attacks grow ever more sophisticated and severe. The extreme range of potential outcomes also adds to the complexity. Organizational systems may be taken down for a couple of hours by some types of attacks, while massive data leaks might trigger regulatory fines, big dips in the stock price and CEO resignation.

Rethinking cyber products: The surface areas for attacks are huge, thanks to ever-expanding technology footprints, proliferating network access points and the multiplying number of connected devices. There are potential legal implications, too; policies generally exclude state-sponsored attacks or those perpetrated by organized crime, though it is very rare in the private sector to know definitely who was behind a cyber attack. Recent activity suggests that policies without coverage for ransomware attacks may not be worth buying.

The bottom line is that clients want to minimize exclusions, which causes insurers to propose unworkably expensive premiums. To provide sufficient protection affordably, insurers may look to apply targeted protections in well managed environments, such as those hosted by large cloud computing platforms. The cost of recovery is another unique complexity. Unlike an auto accident and most property claims, where repair costs are generally fixed, recovering from attacks and data breaches becomes more expensive with time.

But despite these challenges, insurers and reinsurers are still advancing their capabilities. The clear trend shows insurers moving away from basic coverages toward integrated service solutions that rely on richer data feeds and more predictive analytics.

Cyber's customer impact: More insurance leaders now see cyber in light of the customer experience. In the latest EY Tech Horizon survey, ClOs chose "improving cyber security to protect data" as the most important action insurers were taking to improve customer centricity in transformation programs.

Insurers will need to engage with commercial clients directly and regularly to assess their requirements and deploy monitoring technology if they are to refine cyber insurance in line with evolving needs. Such interactions will grow in importance as clients become more informed about their risk profiles.

Initial "trial-and-error" approaches led to more losses than revenue, but insurers have evolved and enhanced their cyber offerings.

HDI takes a holistic approach to cyber insurance

There's no doubt that insurers view cyber as a potential growth area, one that's delivered big premium increases in recent years. However, it also comes with massive and complex risks that are notoriously difficult to model. Indeed, some industry veterans have questioned whether cyber risks are insurable.

Headquartered in Hanover, Germany, HDI Global is innovating to help corporate clients protect themselves. "Not addressing cyber risk in a comprehensive preventive manner, with value-added services and insurance cover, is not a serious alternative," said Meike Röllecke, Head of Cyber and Financial Lines Underwriting at HDI Global (Talanx). "Cyber is an opportunity for the insurance industry if the related growth and threat potential is well balanced based on risk transparency, well-established cyber security practices and underwriting discipline."

HDI's approach blends traditional risk transfer with risk prevention, mitigation and advisory services. The goal is to reduce the frequency and severity of losses, not just provide insurance for the worst case. HDI works with clients on employee awareness and training, multifactor authentication, offline back-ups and incident response readiness. Clients increasingly see the value of these services. "Clients know prevention saves money," said Röllecke.

Clients can tailor core coverage through optional extensions, and the HDI team helps design the right solution. "There is a lot to learn from continuous risk dialogues," said Röllecke. "Insurers and clients must work closely together for the most complete protection possible."

These inputs, along with claims data, have helped HDI define minimum requirements for cyber security, shape policy wordings and underwriting strategies, and develop the services clients need. HDI also understands the role cyber insurance plays in digital transformation and the development of new business models.

Looking ahead, the company expects regulators will establish minimum standards in the area of insurance sums and wordings will be established, similar to those used for fire insurance. Standards will be useful, but corporations and insurers alike must recognize that this is a never-ending game. "The biggest lesson learned may be that there will always be a next lesson to learn," said Röllecke. "Today's central best practice may be different tomorrow." For insurers looking to develop more holistic solutions, tech providers and security companies will top the list of potential partners. Collaborations will help insurers understand the extent of the risks, but also identify and promote leading practices across the cyber security lifecycle. Indeed, prevention, detection and response services will be more closely linked to cyber insurance in the future. Protection may be embedded as part of agreements with large cloud computing providers. Reinsurers will also have a role to play in collecting and disseminating information and developing criteria for risk ratings for specific types of companies and different industries.

Smaller companies will need access to people for recovery, communication and even legal support, which could make their coverage relatively more expensive. Large commercial insurers can also look to offer advisory services to their clients, reflecting the need for collaboration across the C-suite and with third-party vendors. Their solutions may include personnel training and guidance for physical security practices.

The parametric opportunity

Parametric insurance continues to gain traction. Insurers are embracing partners, including InsurTechs, to capture more granular data and to monitor the conditions and events that trigger claims. For instance, flight coverages are now linked to civil aviation authorities that record flight delays. Life insurers are connecting to death registers to trigger claims rather than waiting for bereaved family members to make a claim, which has historically been an operationally inefficient and emotionally difficult process.

Parametric solutions will only get more sophisticated as sensor technology advances. Certainly, they hold the key to assess and manage climate-related claims in real time. The combination of complex risks and a hardening commercial market will make parametric offerings even more compelling in the future.

> **111**X Increase in funding for parametric-based InsurTechs, 2016-21 Source: Pitchbook

Imperative actions for insurers

- Identify mechanisms and external data sources to closely track evolving customer needs and market shifts.
- Develop pattern recognition and insight generation capabilities to explore internal data stores and segment customers to make more suitable product recommendations.
- Establish "product factory" capabilities that leverage core assets to quickly develop, customize and launch new offerings for targeted market segments.
- Make innovation part of standard operations by creating a dedicated function to manage a continuous and repeatable process and a portfolio of ideas and investments at different stages of development and commercialization.
- Create value propositions and experiences to capture demand for new protections and activity in new engagement channels.
- Build the business case for new business models based on quantitative metrics, such as market share gains, customer acquisition costs and cost savings.
- Actively seek new partners for embedded offerings and ecosystem strategies, starting with InsurTechs, tech companies and alternative capital providers, but extending to potential partners in retail, automotive, consumer goods and other sectors.
- Digitize core back-office operations for more cost efficiency, organizational agility and operational flexibility.
- Expand the use of cloud computing and develop more APIs to streamline data sharing for partnering, digital payments and related open insurance plays.
- Identify mechanisms and external data sources to closely track evolving customer needs and market shifts and develop pattern recognition and insight generation capabilities to explore internal data stores.
- Drive cultural change from the top of the organization with senior leaders promoting more risk-taking, piloting and test-and-learn experimentations.

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