



Emerging Risk CRO Survey Whitepaper

2025

Executive Summary

Introduction

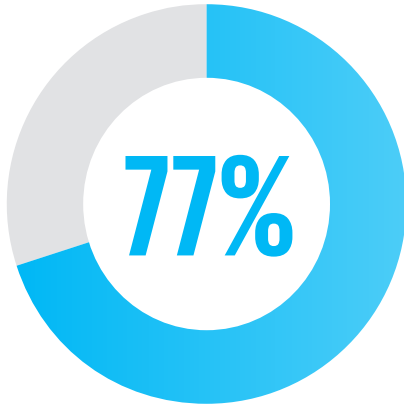
This paper is meant to educate CRO Council Members and insurance industry professionals on Emerging Risks and their potential impacts on the insurance landscape. The information provided is based on survey results and discussions conducted within the CRO Council and is intended to document and formalize key insights. The evolving risks that emerged from this survey will be defined and analyzed in the following sections. These are seen as risks that could significantly impact the insurance sector over the coming years and are categorized by their potential impacts and likelihood.

Disclaimer

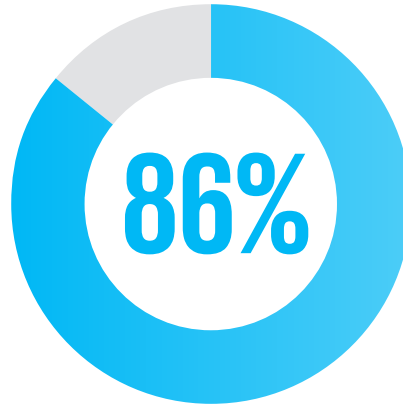
The North American CRO Council Inc. ("Council") is a not for profit corporation, established in 2010, whose Members are the Chief Risk Officers of 35 North American insurers. The following Whitepaper is a study designed to facilitate discussion within the insurance industry, and is not intended to be guidance on laws or regulations. This should not be construed as the corporate position of any of the 35 insurers in the CRO Council. Finally, the intention of the Whitepaper is not to suggest or impose any industrywide standards or expectations.

Defining Features of Emerging Risks

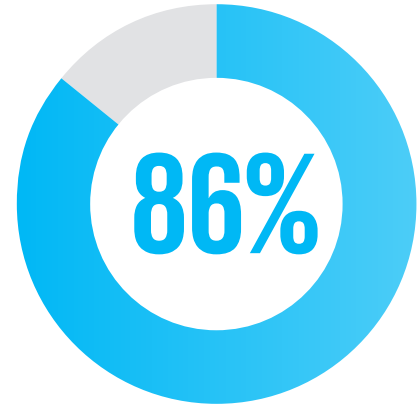
Across organizations there are various definitions of an Emerging Risk. However, they are rooted in the following three main principles—



of respondents indicate that what sets an emerging risk apart from other types of risks is the significant uncertainty around whether it will actually materialize



of respondents indicate that a key characteristic distinguishing emerging risks from other types is that they are not yet well understood or quantified



of respondents characterize an emerging risk as a risk that is unpredictable and difficult to anticipate based on historical data

For the purpose of this Whitepaper, the following definition will be used—

Emerging risks are risks that are new or not yet well understood and could potentially have significant impact in the future. They are characterized by uncertainty and complexity, and may emerge from unforeseen trends, events, or developments.

This contrasts to an evolving risk which may require a change in control as the risk changes, whereas emerging risks likely have no controls in place.



Summary of Results

The top 5 emerging risks identified were:



Economic Shifts



Geopolitical Instability



Technological Disruptions



Cybersecurity and Data Breaches



Regulatory Changes

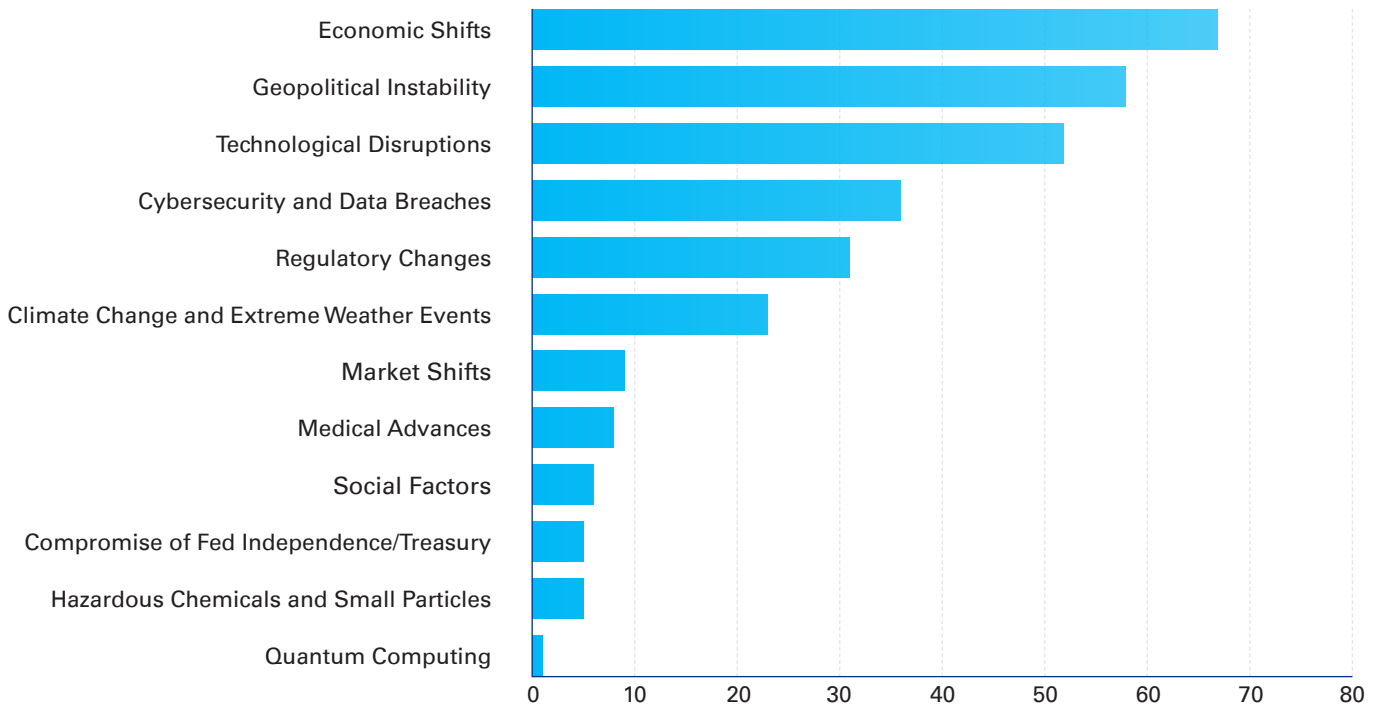
- While no single risk was selected by all respondents, economic shifts were the most frequently ranked among the top 5 emerging risks across all responses. Risk assessments such as scenario analysis and stress testing are being used to identify emerging risks
- Emerging Risks tend to be highly correlated and there are gray areas between their definitions.
- Emerging risks are anticipated to impact organizations in several key areas, with the highest ranked impact responses including profitability, market opportunities, and operations.
 - These include shifts in underwriting costs and profitability, operational disruptions, adjustments to product offerings, emerging market opportunities, and increased investment in technology and cybersecurity.

Emerging Risks—Ranked by Potential Impact

The Emerging Risks in this graph are ranked in order of potential impact. Survey respondents were asked to identify their top five risks, and each

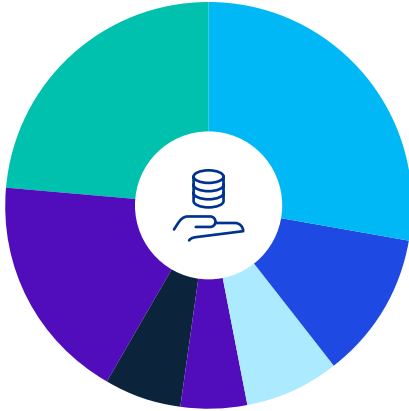
ranking was assigned a weighted score—5 points for the top risk, 4 for second, down to 1 point for fifth.

Overall Emerging Risks (Weighted View)

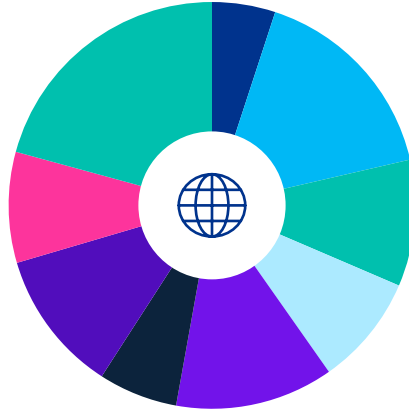


Impacts of Leading Emerging Risks (Weighted View)

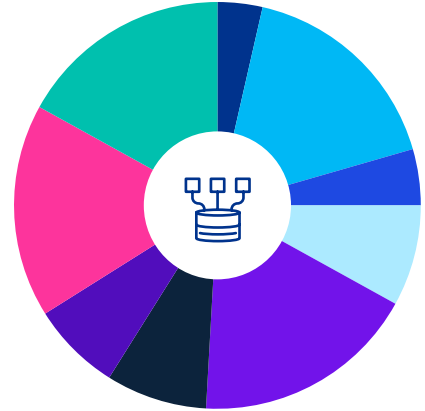
Potential Impacts of Economic Shifts



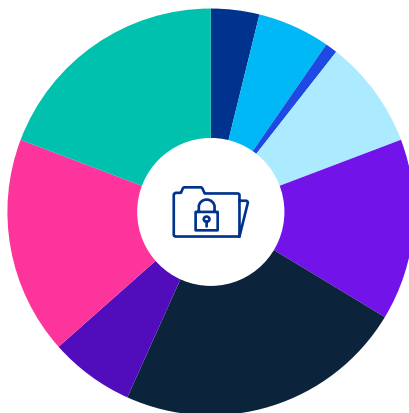
Potential Impacts of Geopolitical Instability



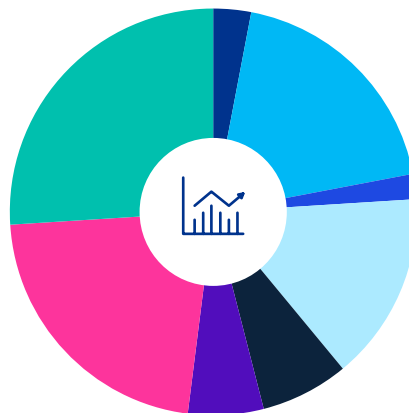
Potential Impacts of Technological Disruption



Potential Impacts of Cybersecurity and Data Breaches



Potential Impacts of Regulatory Changes



- Change in claims frequency
- Reputational risk and customer attrition
- Change in underwriting costs or profitability
- Market opportunities
- Change in/effects on reinsurance requirements
- Investment in technology and cybersecurity
- Change/adjustments of product offerings
- Change in demand for specific insurance coverages
- Operational disruption

Risk Roadmap

The following roadmap provides a high-level view of the Key Emerging Risks and groups them by category, potential impact, and time horizon of the risk's impact. Each risk was assigned to the category with the most relevance; however risks may impact multiple categories. A deeper dive on each risk can be found in the following pages, organized by category.

Key Risk Category

Financial



Life/Health Insurer



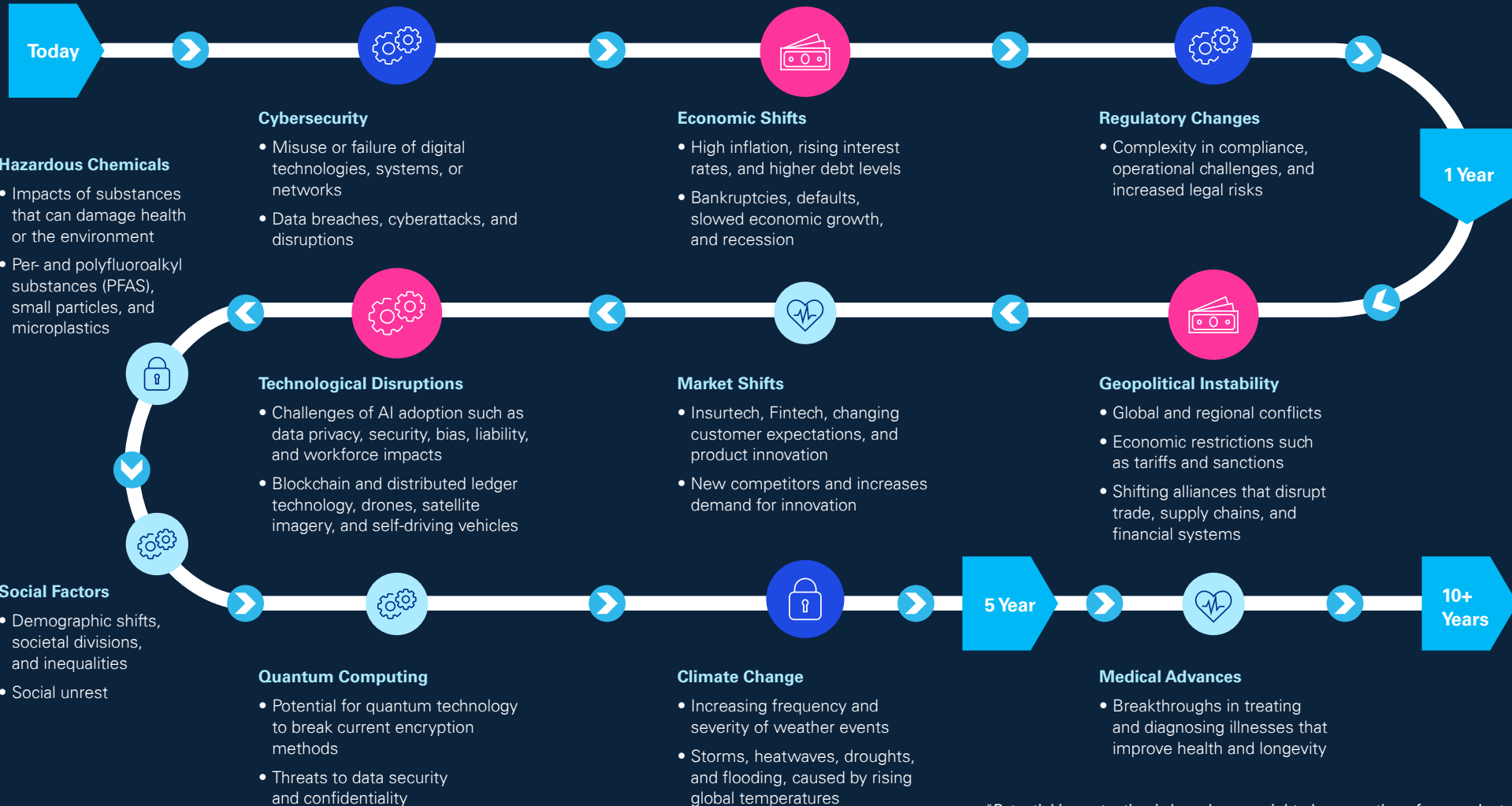
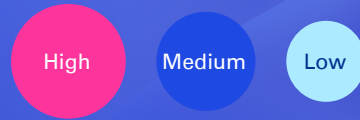
Non-Financial



P&C Insurer



Potential Impact*



*Potential impact rating is based on a weighted aggregation of respondents' rankings of their top 5 risks

Financial Risks



Economic Shifts



Potential Impact: High



Time Horizon: 0-1 Years



Definition: Threats posed by factors like high inflation, rising interest rates, and higher debt levels that can lead to bankruptcies, defaults, slowed economic growth, and recession

Top of Mind Scenarios and Concerns

- **Investments:** Changes in interest rates and asset values will affect investment income. Investment income may decrease due to economic downturns or credit defaults.
- **Profitability:** Economic downturn can increase frequency of certain types of claims (e.g., workers compensation claims increase when unemployment rates rise).
- Retirement accounts increasingly involved in **Private Equity Markets and Cryptocurrency**, which raises concern over investment transparency and risk.



Risk Impacts

- Bankruptcies, defaults, slowed economic growth, recession



Addressing the Risk

- Maintain adequate financial reserves
- Continuously monitor economic indicators and market trends
- Spread investments and operations across different sectors





Geopolitical Instability



Potential Impact: High



Time Horizon: 1-5 years



Definition: Risks include global and regional conflicts, economic restrictions such as tariffs and sanctions, and shifting alliances that disrupt trade, supply chains, and financial systems.

Top of Mind Scenarios and Concerns

- **Supply chain** disruptions, such as in the medical supply chain, may lead to worsened health outcomes and higher healthcare costs.
- The inability to **adapt to changing policies** may weaken competitive and financial resilience.
- **Weaponization** of AI and cyberattacks by states, such as attacks on sources of energy and power.
- **Sovereign debt** crises that lead to trade disruptions, market volatility and political unrest. These create significant investment risk and credit exposure, as insurers invest in government bonds.



Risk Impacts

- Supply chain disruptions
- Operational challenges
- Increased underwriting risk



Addressing the Risk

- Diversify risk exposure geographically
- Supply chain mapping
- Scenario based models and sensitivity testing
- Integrating tariff and trade war scenarios into enterprise risk management (ERM) and stress testing frameworks



Financial Emerging Risks—Case Studies

- **Sri Lanka’s 2022 sovereign default, currency collapse, and inflation surge** eroded investment values and destabilized financial markets. For life insurers, this reduced portfolio returns and heightened reinvestment risk. P&C insurers faced declining premium volumes and rising claims costs.
- **Global oil markets face a potential oversupply** due to increased production amid weakening demand. Trade disputes and tensions among major economies have slowed consumption growth, leading to a persistent surplus. Market analysts anticipate continued volatility in prices and supply through 2026. Fluctuating energy prices can influence claims costs and investment returns, particularly for insurers with commodity exposure.
- **Rise in US tariff rates** to a century record high have impacted global supply chains and escalated trade tensions, leading to higher claim expense in physical damage coverages.
- In 2025, the Federal Reserve’s **potential interest rate cuts** following slowing inflation may reduce yields on fixed-income investments, which are a key component of insurers’ portfolios, which can lower investment income for insurers.
- **China’s property sector** continues to face significant challenges, with major developers defaulting on bonds and a major property developer’s impending delisting from the Hong Kong Stock Exchange. These issues have led to a decline in real estate investment and a lack of comprehensive solutions from the central government. Insurers with exposure to the Chinese property market may face increased credit and investment risks.



Non-Financial Risks



Regulatory Changes



Potential Impact: Medium



Time Horizon: 0-1 Years



Definition: Shifts in the regulatory environment that create complexity in compliance, operational challenges, and increased legal risks.

Top of Mind Scenarios and Concerns

- **Executive orders**, such as healthcare policy changes, increase potential for regulatory penalties.
- **Increased cost of compliance** due to changing regulations and increased upkeep.
- The **democratization of private credit** introduces new risks into the industry and asset admissibility concerns.
- **Relocations** in the corporate landscape create uncertainties around jurisdictional compliance.
- **Capital requirements** may drive down profit and constrain investment strategies.



Risk Impacts

- Reputational harm
- Reduced profitability from regulatory penalties
- Operational risks



Addressing the Risk

- Establish a regulatory intelligence function
- Stress test for liquidity mismatches
- Shift to flexible investment structures that can adapt to changing regulations





Cybersecurity



Potential Impact: Medium



Time Horizon: 0-1 Years



Definition: Threats arising from misuse or failure of digital technologies, systems, or networks. These risks include data breaches, cyberattacks, and disruptions.

Top of Mind Scenarios and Concerns

- **AI enhanced malicious threats**—by using AI, bad actors can create more realistic fake websites, emails, deep fakes, and other social engineering schemes. These can be scaled quickly using AI, leading to more potential harm.
- **Increased external cyber and data threats** due to technology related risks becoming a larger part of an organization’s enterprise risk portfolio.
- **Cyber threats on insurance systems** that make decisions on pricing and claims approval.
- **Organization backed hackers** are enabled with resources such as funding and intelligence, which enables a more sophisticated cyberattack.



Risk Impacts

- Compromised or lost data
- Operational disruption
- Reputation risk for the company and the potential for customer attrition



Addressing the Risk

- Testing cyber resilience
- Expanding scenario analysis and stress testing
- Investing in cybersecurity and risk data analytics
- Advocating for regulatory changes and compliance standards to mitigate breaches



Technological Disruptions



Potential Impact: High



Time Horizon: 1-5 years



Definition: Challenges resulting from AI adoption, including data privacy, security, bias, liability, and workforce impacts. Also includes other technology such as blockchain and distributed ledger technology, drones and satellite imagery, self-driving vehicles, etc.

Top of Mind Scenarios and Concerns

- **Regulatory difficulties:** complex AI models have less interpretability, creating challenges in justifying decisions to regulators.
- The struggle to adapt and innovate, especially for smaller companies may lead to operational inefficiencies and **competitive disadvantage**.
- **AI washing**, the exaggeration or misrepresentation of the use of AI in products, poses risks to Insurers by creating false confidence amongst stakeholders.
- **Agentic AI** systems can make erroneous autonomous decisions, increasing unintended liabilities.
- Inconsistent airspace rules for **drones** and onboard surveillance tech may expose insurers to liability and reputational risks from drone-related accidents and privacy violations.



Risk Impacts

- Operational disruptions
- Increased cyber risk exposure
- Increased investment in technology and training
- Amplifier for other risks (cyber, unemployment, etc.)



Addressing the Risk

- Implementing AI governance frameworks
- Investing in AI tools
- Strengthening data privacy and security measures



Social Factors



Potential Impact: Low



Time Horizon: 1-5 Years



Definition: Risks arising from demographic shifts, societal divisions, inequalities, and social unrest.

Top of Mind Scenarios and Concerns

- **Aging population** and increased demand for long term care.
- **Nuclear verdicts** and the increased likelihood of class action lawsuits or nuclear verdicts, particularly in emotionally charged social climates.
- **Globalized workforce** increases wage volatility and shifts employment patterns.
- **Polarization** and growing divisions in society increase the likelihood of social instability.
- **Healthcare disruptions** in healthcare delivery exacerbate health inequalities and increase social unrest.



Risk Impacts

- Market and financial instability
- Rising claim costs from certain risks
- Aging populations drive up long-term insurance costs



Addressing the Risk

- Advanced data analytics to identify emerging claim patterns linked to social unrest or demographic changes
- Investing in loss prevention programs by partnering with local organizations
- Product innovation tailored for aging population



Quantum Computing



Potential Impact: Low



Time Horizon: 1-5 Years



Definition: The risk related to the potential for quantum technology to break current encryption methods, threatening data security and confidentiality.

Top of Mind Scenarios and Concerns

- **Old systems** and Legacy IT systems may fail under new standards post quantum computing. Cybercriminals may have access to sensitive policyholder data.
- **Policy wordings** may increase legal disputes over policy coverage, especially if policy wording doesn't address quantum-induced vulnerability.
- **Race to the top:** intense competition and pressure by companies to bring quantum computing to market accelerates risks.
- Quantum computing relies on physical laws rather than traditional mathematics, creating a **unique risk landscape**.



Risk Impacts

- Potential for quantum technology to break current encryption methods
- Threats to data security and confidentiality
- Long tail nature of risk, even if current systems seem secure



Addressing the Risk

- Partnering with cybersecurity firms to assess quantum computing readiness
- Explore quantum related endorsements for cyber coverage in products
- Building quantum awareness across internal teams

Non-Financial Risk Case Studies

- AI powered platforms can successfully appeal insurer claim denials, lowering the barrier for patients to appeal claim denials and driving claim payouts.
- Many major insurers are **facing lawsuits for using AI based algorithms** that auto-deny claims requests. For example, a health insurance provider denied 300,000 claims at 1.2 seconds of review per claim. Scenarios such as this erode public trust in Insurance companies.
- **Insurers are developing hybrid policies** that combine life insurance with long-term care (LTC) riders and cash components. These products allow policyholders to age in place with the help of relatives or friends, offering flexibility in caregiving options. This supports home based aging, which is significantly more cost friendly than care in nursing homes.
- In a recent congressional hearing, U.S. lawmakers are urging **modernization of federal cybersecurity** as quantum computers could eventually break current encryption protecting sensitive data. This could expose insurers to significant liability, operational, and reputational risk.
- In 2024, a Philadelphia **jury awarded a \$2.2 billion thermonuclear verdict** against a biotech company over claims that its weedkiller caused non-Hodgkin lymphoma.
- In 2024, the number of **“thermonuclear verdicts”** (jury awards exceeding \$100 million) reached a record 49, up from 27 in 2023. These high-stakes cases spanned 55 industries and 34 states, driving up claim costs for several insurers.
- In July 2025, a leading North American insurer experienced a **significant data breach** affecting approximately 1.4 million U.S. customers. The breach occurred through a third-party cloud-based platform using social engineering tactics. This breach not only created significant losses but also exposed the company to more regulatory scrutiny and caused reputational damage.
- Following the assassination of a major health insurance company CEO in late 2024, an Emerson College poll found 41% of young adults viewed the act as “acceptable,” reflecting **deep frustration with corporate healthcare practices**.



Life/Health Insurer Risks



Market Shifts



Potential Impact: Low



Time Horizon: 1-5 Years



Definition: Risks related to Insurtech, Fintech, changing customer expectations, and product innovation. Introduces new competitors and increases demand for innovation.

Top of Mind Scenarios and Concerns

- **Innovation:** traditional insurers losing market share to agile Insure-techs with expectations rising for personalized coverage.
- **Pace of adaptation:** moving too slowly puts insurers behind competitors whereas moving too fast can lead to misjudgment and costly missteps.
- Without product **diversification**, Insurers are more vulnerable to sector specific downturns.



Risk Impacts

- Loss of market share
- Increased vulnerability during downturns
- Additional risk uncertainties in new domains



Addressing the Risk

- Invest in data analytics and trend monitoring to detect shifts in consumer behavior, competitor moves, and regulatory changes
- Diversify risk exposure and adjust pricing models
- Partner with insurtechs, platforms, or distribution partners to access new customer segments and technologies



Medical Advances



Potential Impact: Low



Time Horizon: 5-10 Years



Definition: Involves breakthroughs in treating and diagnosing illnesses that improve health and longevity.

Top of Mind Scenarios and Concerns

- **Claims processing:** advanced therapies require specialized claims processing, which increase operational costs for insurers.
- Rapid medical innovation can amplify the risk of **misdiagnosis**, increasing liability for insurers.
- **Neurotechnology and wearables** enable the potential misuse of sensitive biometric data, raising privacy concerns and driving up liability claims.
- Specialized claims adjudication increases **operational costs** and potential errors.
- **Pricing models** have limited data to support the impact of medical advances and sudden significant increases in longevity. The volatility in future claims.



Risk Impacts

- Higher severity of claims from higher medical costs.
- Volatility in claims creates difficulties in pricing and reserving.
- Limited data available to support actuarial modeling.



Addressing the Risk

- Incorporate new treatments and technologies into underwriting and pricing models
- Risk transfer to mitigate financial volatility from high-cost treatments
- Working closely with healthcare providers to verify treatments

Life/Health Insurer Risk Case Studies

- A health insurance company's digital-first model has **reshaped customer expectations in health insurance**, integrating telemedicine and AI-driven care navigation. This shift has pressured traditional insurers to accelerate digital transformation and rethink engagement strategies.
- Embedded life insurance offering allows consumers to purchase coverage during unrelated digital transactions, introducing **new distribution risks and underwriting complexities**.
- **A life insurer's longevity subscription model** emphasizes proactive health management through regular assessments and coaching, challenging traditional pricing and retention assumptions.
- **AI-powered claims processing** enables near-instant adjudication, improving efficiency but raising concerns around fraud detection and regulatory oversight.
- Company's **expansion into cyber insurance** for healthcare providers has introduced new underwriting challenges, as insurers must now assess digital risk exposure alongside traditional health metrics, especially in light of rising ransomware attacks on hospitals.
- **Breakthroughs in neurotechnology** have enabled disabled patients to regain mobility and communication, potentially reducing long-term disability claims and reshaping underwriting for neurological conditions.
- AI-driven cancer drug discovery has **accelerated treatment access** and improved survival rates, prompting insurers to reevaluate pricing for critical illness and cancer riders.

P&C Insurer Risks



Hazardous Chemicals



Potential Impact: Low



Time Horizon: 1-5 Years



Definition: Impacts of substances such as Per- and polyfluoroalkyl substances (PFAS), small particles, and microplastics that can damage health or the environment.

Top of Mind Scenarios and Concerns

- **Exposure** to toxic substances can have long-term health effects emerging years after exposure, leading to complex, high-value personal injury claims.
- Changing **environmental laws** increase insurer liability for cleanup and damages.
- **Contaminants** such as nanoplastics, PFAS, metal contaminants, and other forever chemical drive-up product liability claim costs.
- **Federal budget cuts** and reductions in safety programs weaken oversight and increase frequency.



Risk Impacts

- Regulatory and legal risk
- Higher operational costs
- Environmental liability



Addressing the Risk

- Offering tailored policies that address third party liability, environmental cleanup, and bodily injury from chemical incidents
- Encouraging insureds to implement early detection systems and rapid response protocols from toxic chemicals
- Staying current on environmental laws and regulations
- Tighten underwriting guidelines





Climate Change



Potential Impact: Medium



Time Horizon: 1-5 Years



Definition: The increasing frequency and severity of extreme weather events, such as storms, heatwaves, droughts, and flooding, caused by rising global temperatures.

Top of Mind Scenarios and Concerns

- **Decreased profitability:** exposure to large climate related losses drives up loss ratios, decreases profitability, and may even lead to insolvencies.
- There are **insurance availability concerns** in certain catastrophe prone regions; this impacts policyholder wellbeing and insurer's reputations.
- The **growing demand for electricity** to power advanced technologies drives fossil fuel and water use competition between large companies and individuals.
- **Market withdrawals:** severe weather events trigger large scale market withdrawals and create instability in the insurance market.



Risk Impacts

- Exposure to large losses
- Increased frequency of claims
- Underwriting losses



Addressing the Risk

- Adjusting coverage, pricing, underwriting guidelines, and exposure
- Encouraging policyholders to adopt climate resilient practices and infrastructure
- Investing in analytics to better understand climate risks

P&C Risk Case Studies

- **Hurricane Helene** in the fall of 2024 made landfall in the Southeastern U.S and caused extensive property damage, flooding, and displacement of residents. Moody's RMS estimated insured losses between \$8 billion and \$14 billion, with a best estimate of \$11 billion. It also significantly impacted reinsurance prices and caused insurers to reevaluate their exposure in those regions.
- The **2025 Los Angeles wildfires** emerged as one of the most financially significant natural disasters in U.S. history, with an estimated loss of around \$30 billion. While this event did lead to significant legislative proposals and tort reform, claim costs and losses were at an all time high, causing insurers to reevaluate their exposure.
- The new EPA regulations establish strict limits on **PFAS concentrations** in drinking water, which led to a ten-billion-dollar settlement by major manufacturer to resolve claims related to PFAS contamination. This introduces additional exposures, heightened underwriting scrutiny and a reduction in new business opportunities.
- Cities struggle to combat **lead poisoning** amid Federal cuts. Reduced Federal support shifts responsibility to property owners and insurers to manage lead hazards. Many insurance policies currently exclude lead poisoning claims, leaving residents with limited options for compensation. Proposed legislation aims to require insurers to cover lead-related damages, opening up new, risky exposures for insurers.
- Several studies have linked **microplastics** to various health issues, such as inflammation, oxidative stress, immune dysfunction, metabolic disorders, and cognitive decline. Major companies have faced class action lawsuits related to microplastics, and these instances are driving up liability claims for insurers.

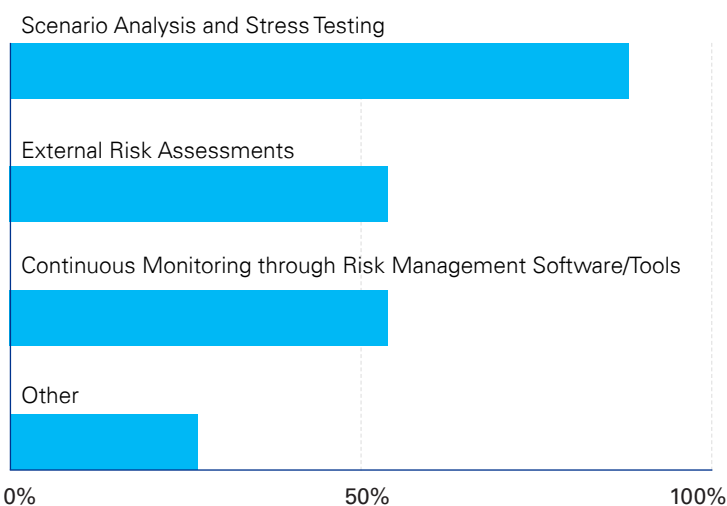


Emerging Risk Frameworks and Management

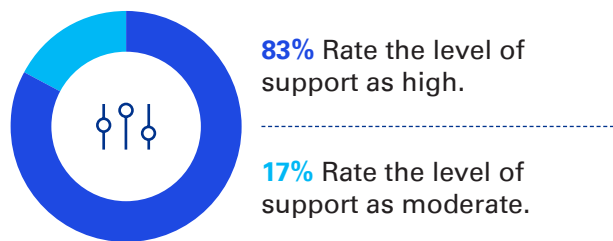
Current Framework: Tracking and Monitoring



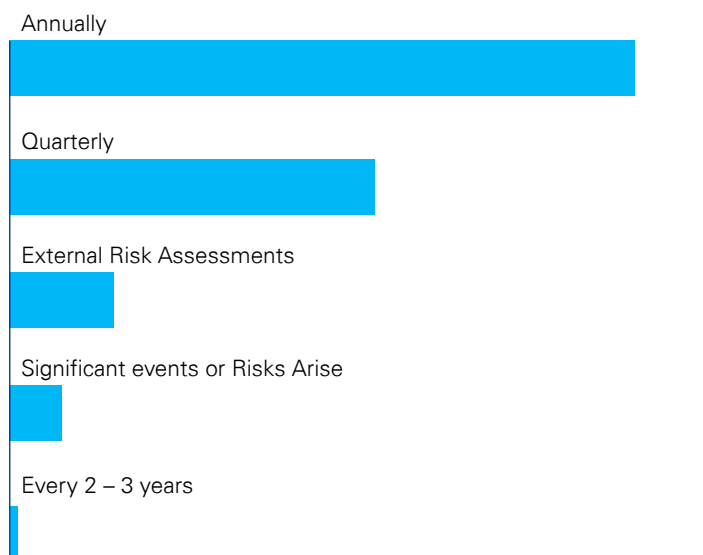
Methods for Identifying Emerging Risks



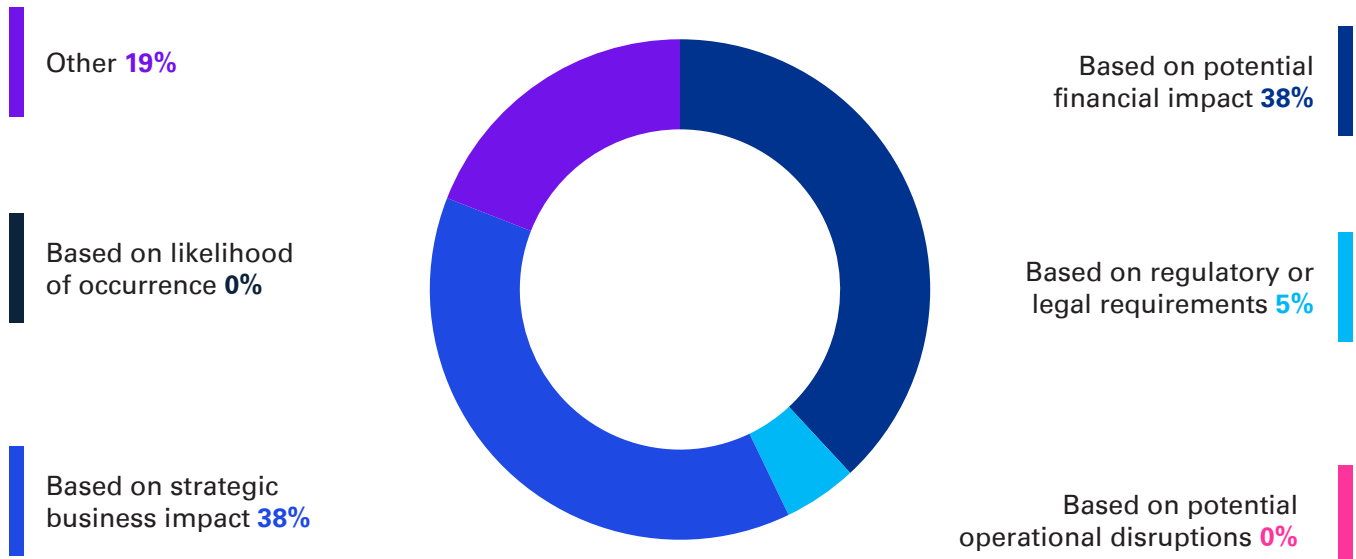
Companies report having support for their emerging risk programs from the C-suite and senior management.



Most organizations update their emerging risk management framework annually.

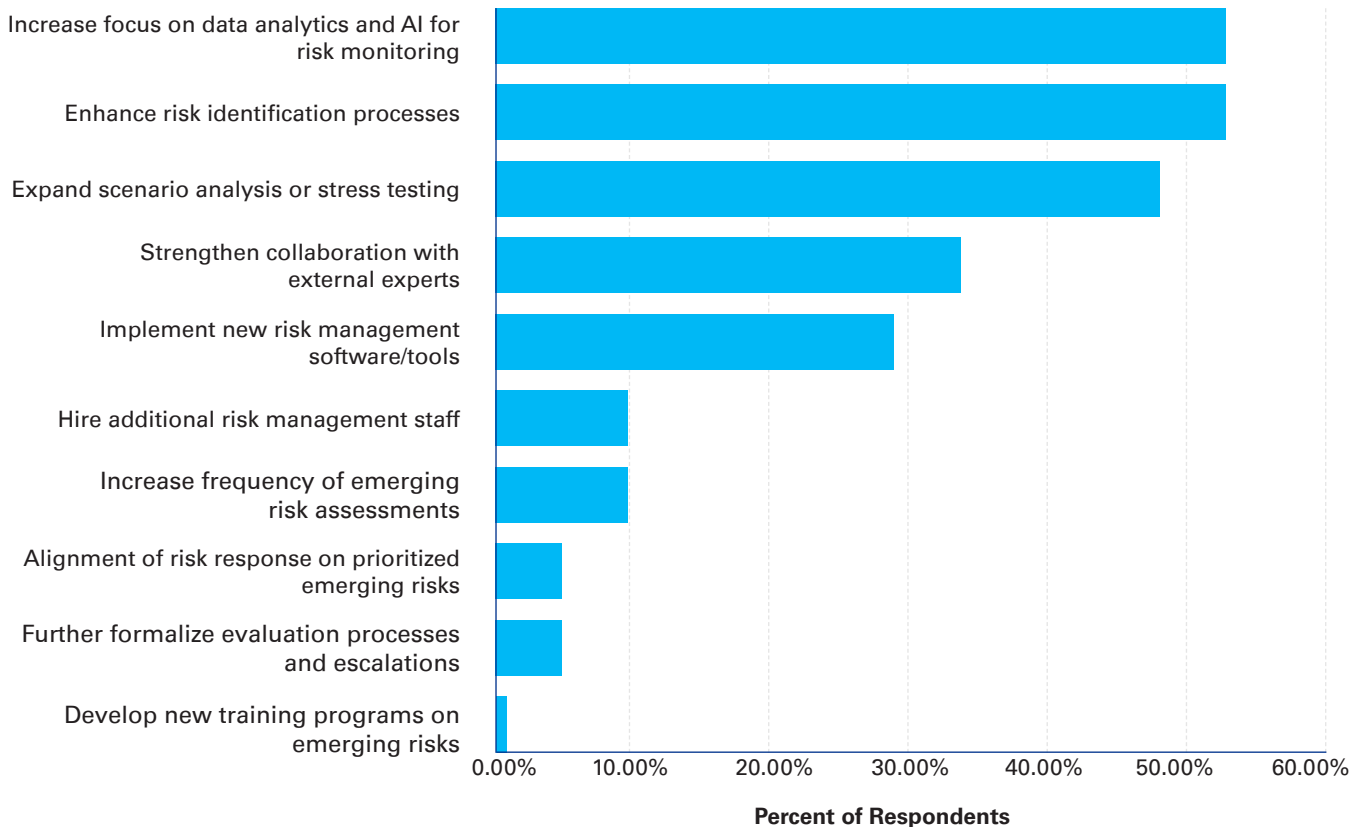


Current Framework: Prioritization of Emerging Risks



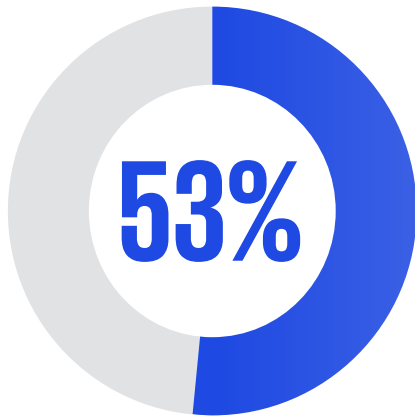
Planned Enhancements

When asked about specific actions the organization is planning to enhance their approach to emerging risks in the near-term (next 1 to 2 years), survey respondents indicated the following methods:

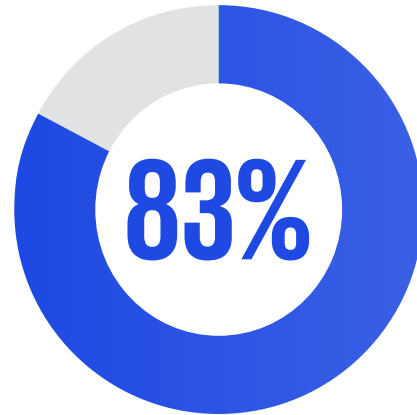


Actions to Enhance Risk Management

Organizational Considerations



of organizations indicated that they lack dedicated resources for Emerging Risks



of respondents do not anticipate structural changes to better manage emerging risks

Future Outlook

Over the next 2-5 years, companies believe that to better align emerging risk objectives with overall business strategy, they should more effectively integrate risk considerations into strategic planning and increase the use of technology to support risk management strategies.



Appendix

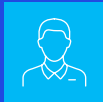
Survey Information



Results from the survey were fully anonymized



There were 22 survey respondents from organizations in life, health, property casualty, retirement, annuities, disability, and long-term care insurance sectors



Half of respondents have had the role of chief risk officer for 1-3 years, with 27% having been in the role for 4-7 years.



7 participants said their material exposure is Property Casualty Insurance, 14 said Life/Health and 1 had material exposure in both. 8 respondents also had material exposure in reinsurance



Geographic representation includes companies operating in North America, Europe, Latin America, the Middle East, and Africa