Insurance in the Age of AI

A report series of the Geneva Association

Ruo (Alex) JIA

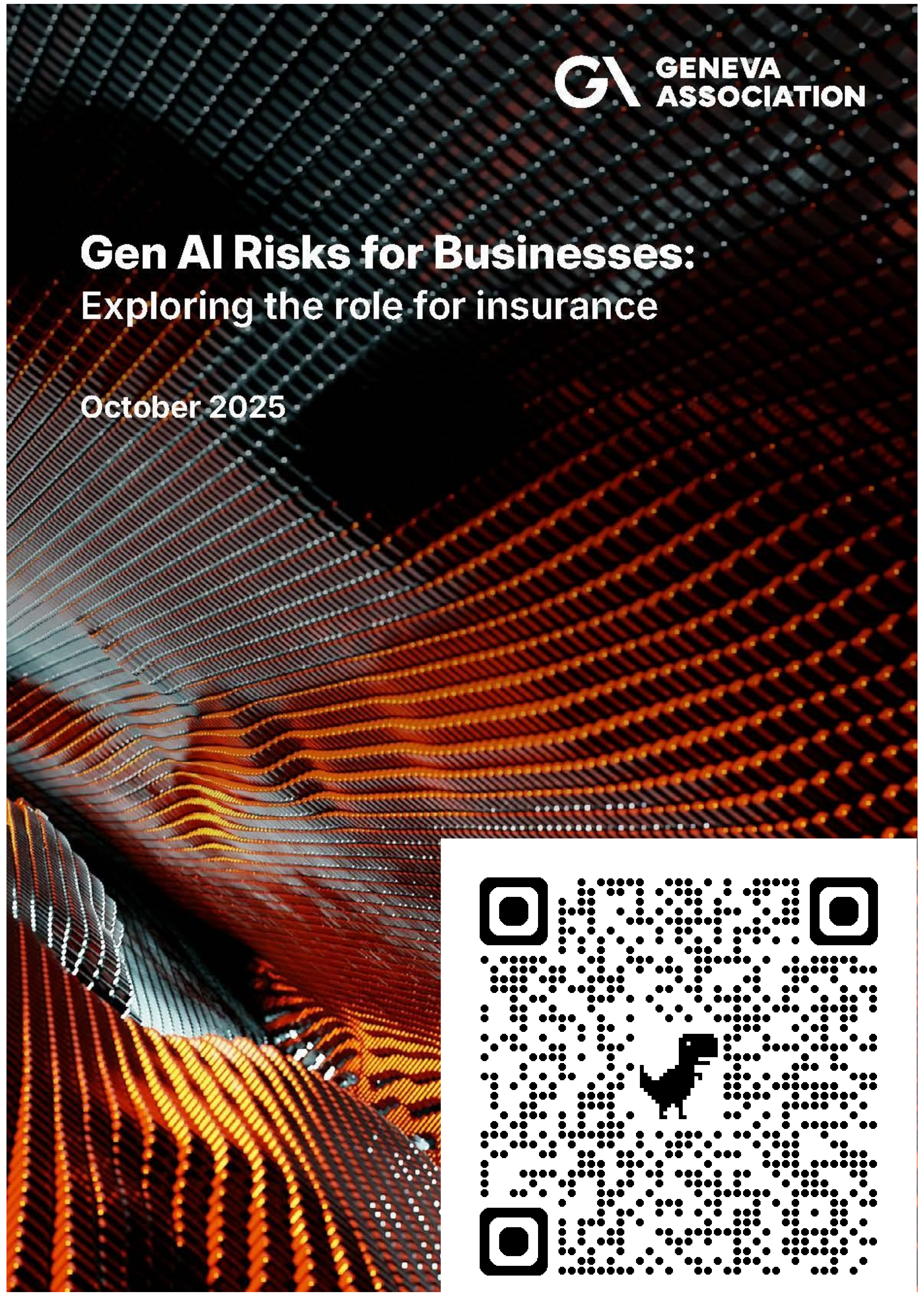
Deputy Editor-in-Chief, The Geneva Papers on Risk and Insurance – Issues and Practice

Associate Professor of Insurance, Peking University

29 June 2026

Seoul , International Workshop on Risk and Insurance

Geneva Association Gen AI and insurance report series



Report 1: Gen AI Risks for Businesses: Exploring the role for insurance (published on 2 October, 2025)

Report 2: Gen AI in the Insurance Customer Journey (published on 20 November, 2025)

What is Generative AI – From Prediction to Creation

Traditional AI
The Analyst

- **Function:** Analyzes data to find patterns.
- **Output:** Predictions (e.g., “Is this transaction fraudulent?”).
- **Mechanism:** Deterministic mapping of predictors.
- **Insurability:** Clearer parameters, easier to validate.

Generative AI
The Creator

- **Function:** Creates NEW content (Text, Code, Audio, Video).
- **Output:** Original artifacts.
- **Mechanism:** Probabilistic; predicts next “token” in a sequence.
- **Insurability:** ‘Black Box’ opacity makes error tracing difficult.

Two Forms of Gen AI

Insurer-Provided Tools

Specialized tools deployed directly by insurance carriers.

Examples:

- Advanced chatbots
- Underwriting assistants
- Automated claims triage (e.g., Tokio Marine)
- Email drafting tools (e.g., Allstate)

Primary Goal:
Automation and personalized customer engagement.

Gen AI

Off-the-Shelf Tools

General-purpose platforms (e.g., ChatGPT, Copilot, DeepSeek) used independently by customers.

Functions:

- Analyzing insurance policies
- Comparing products
- Clarifying terms without insurer involvement

Primary Goal:
Information gathering and decision support.

Impact Across the Customer Journey

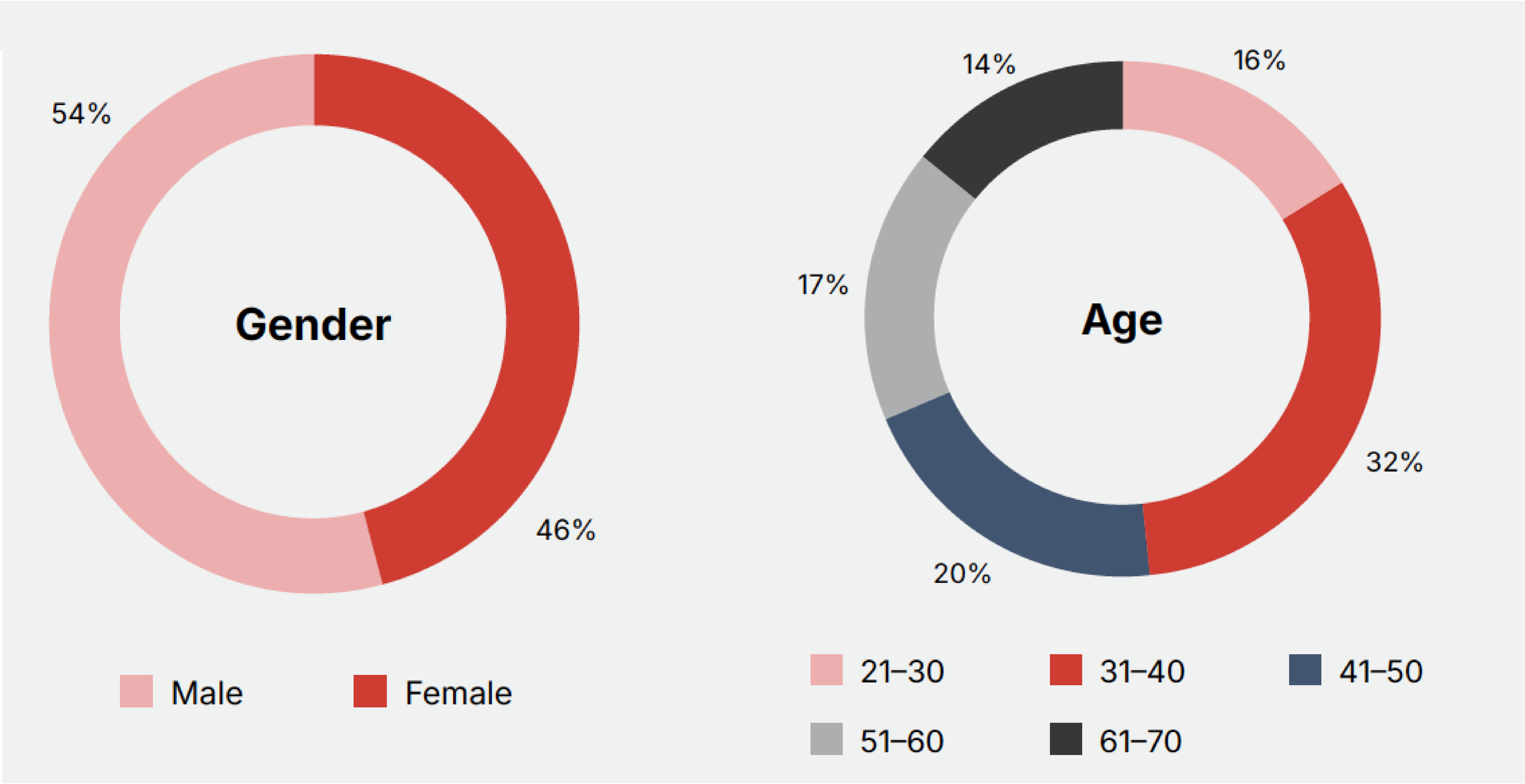
Stages of the Insurance Journey:
- Information gathering
- Seeking advice
- Purchasing
- After-sales service
- Claims handling

Gen AI impact is strongest in:
- Advisory functions
- Claims communication
- After-sales engagement

	Gathering information	Seeking advice	Purchasing policy	After-sales service	Making a claim
Existing digital technologies (internet, mobile, social media, etc.)	High	Low → Medium	Medium	High	Medium
Additional Impact of Gen AI	High	High	Low → Medium	Medium → High	Medium → High

Customer Survey Overview

Data Source: Survey of 6,000 customers (Age 21–70).



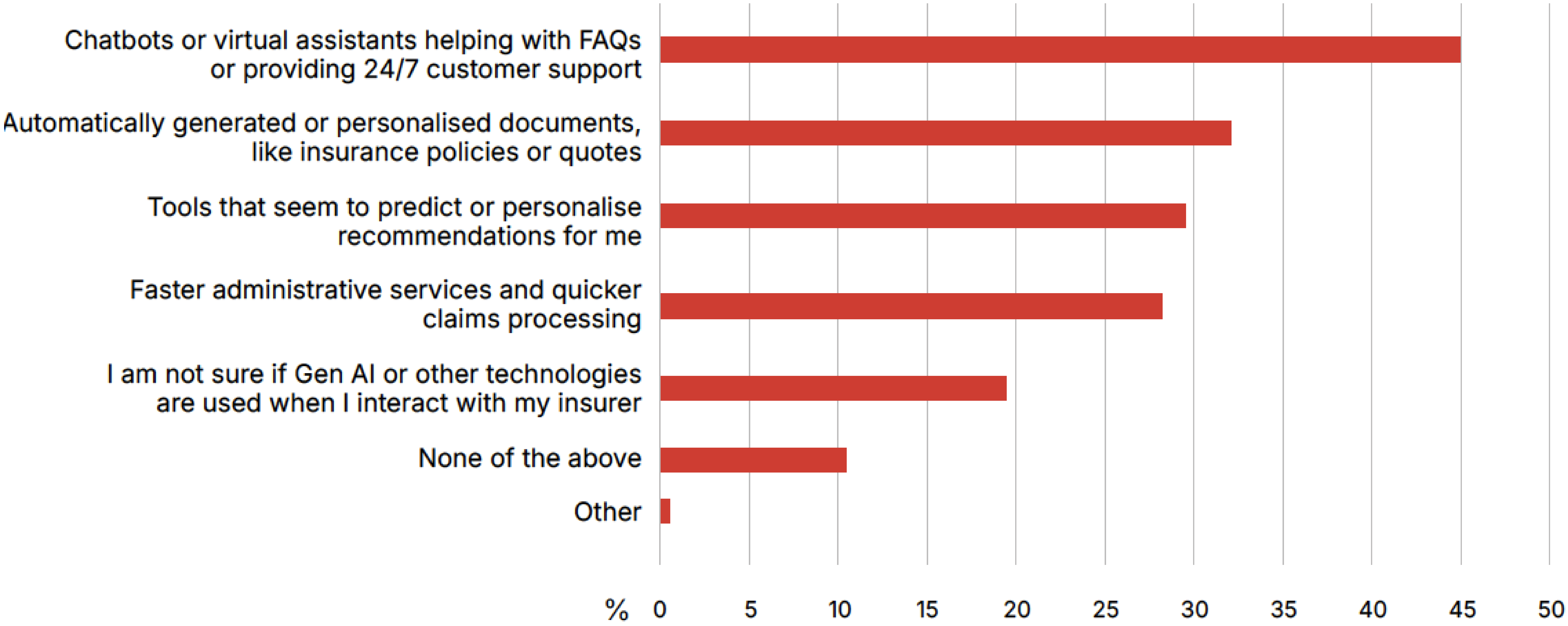
Must understand what Gen AI is.

Source: Geneva Association insurance customer survey

Customer Awareness of AI Use

- 45% noticed chatbots / virtual assistants
- 32% noticed auto-generated documents
- 18% unsure whether AI is used

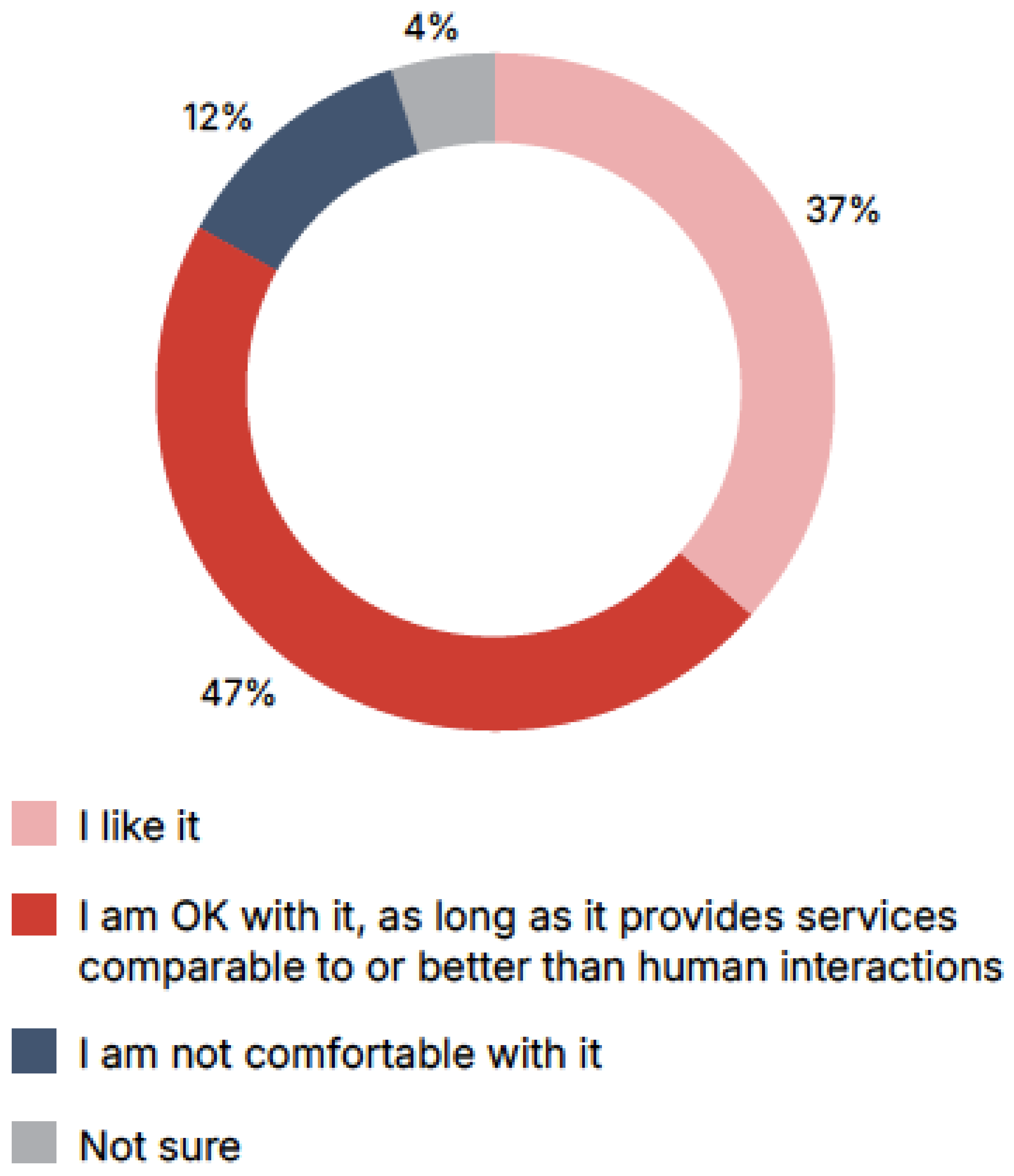
Which, if any, of the following Gen AI applications have you noticed your insurance company using when interacting with you?



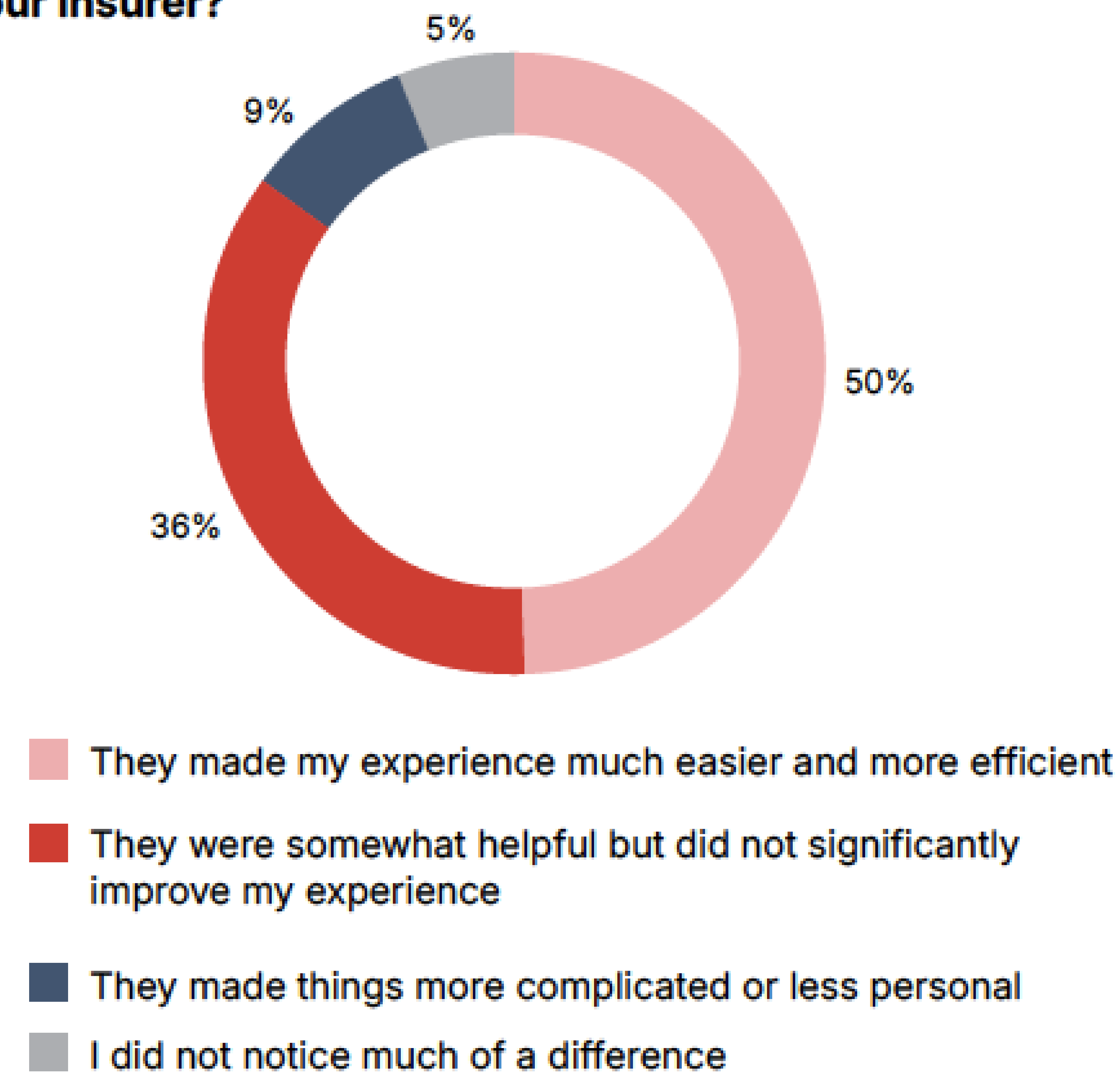
Source: Geneva Association insurance customer survey

Customer Sentiment Toward Insurer provided AI:

How do you feel about your insurer using Gen AI to interact with you?

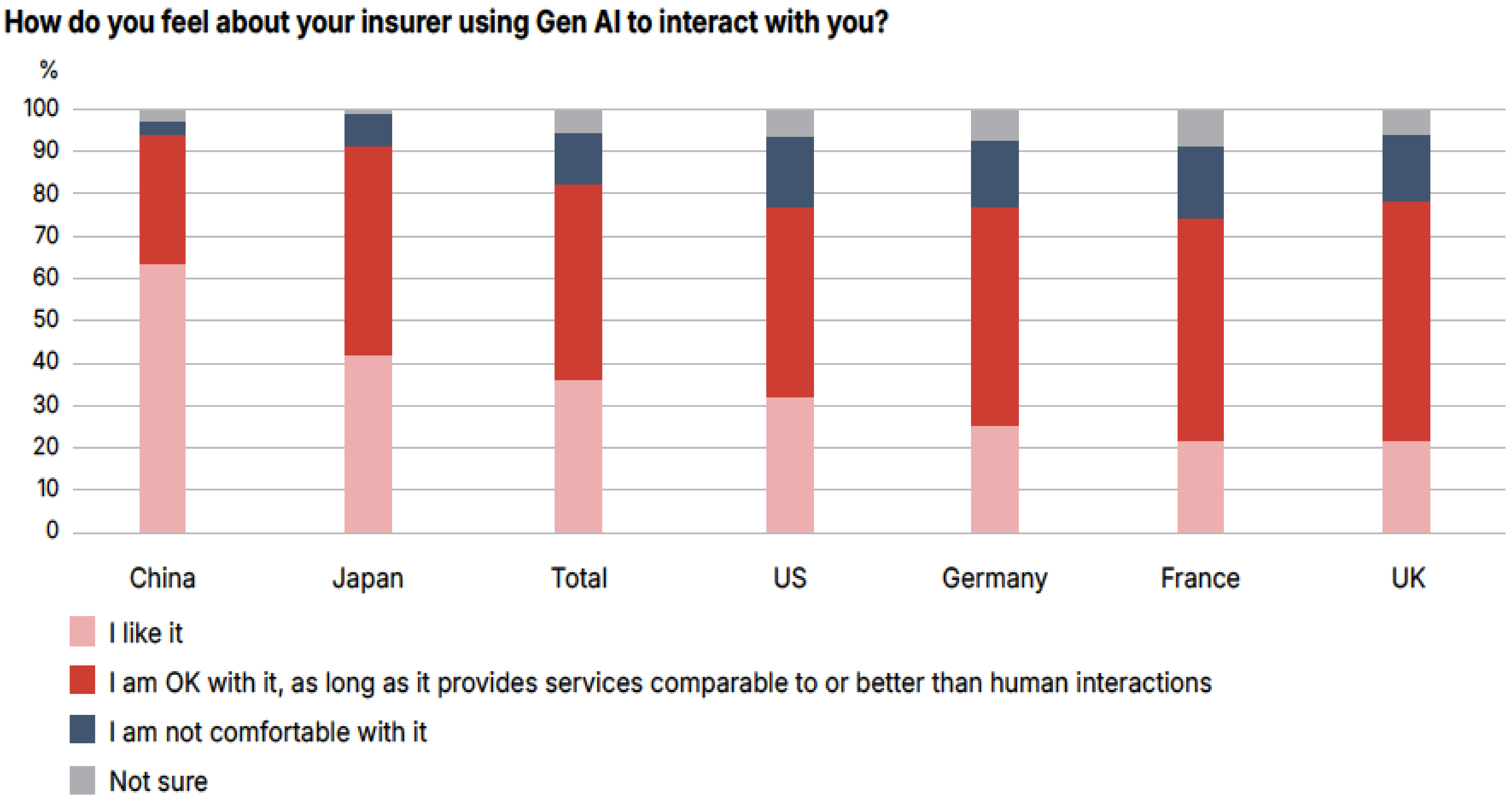


Based on your experience, how would you describe the impact of Gen AI tools on your interactions with your insurer?



The East-West Divide in Acceptance

Asian markets exhibit significantly higher enthusiasm compared to Western skepticism.

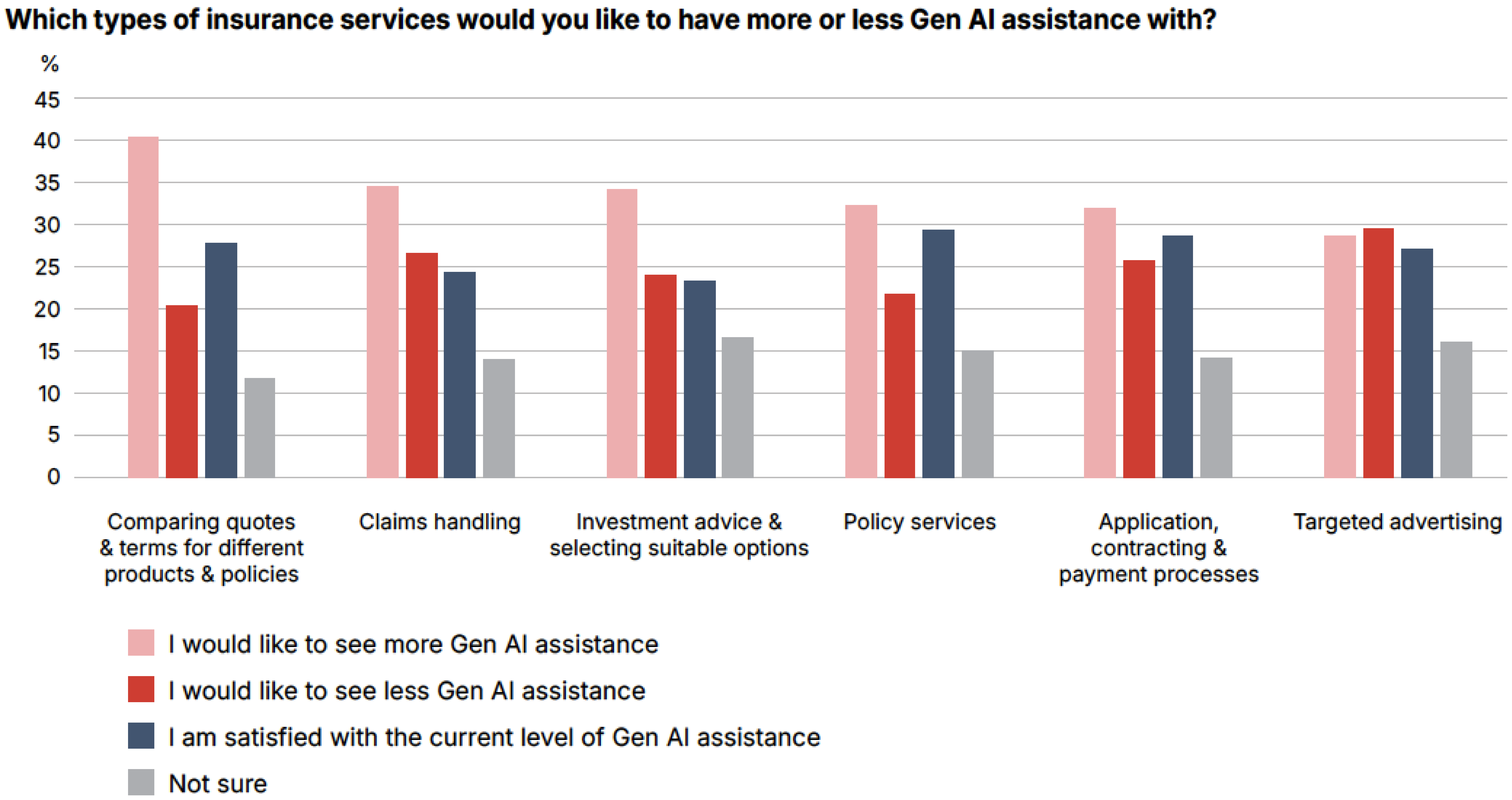


Regional Drivers

•**Asia**: High acceptance driven by digital ecosystem exposure and cultural openness.

Demand by Insurance Activity

AI is welcomed for utility, not advertisement.



Customers want **MORE** AI in:

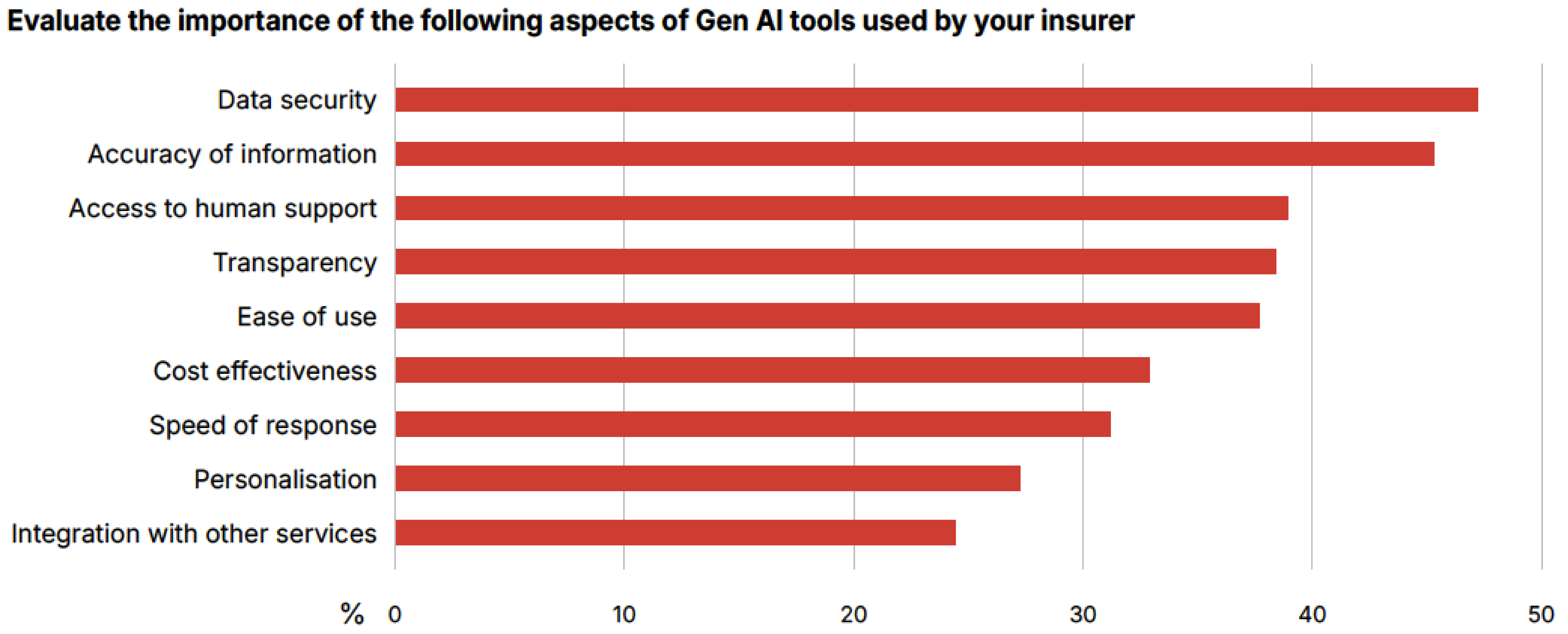
- Comparing quotes
- Claims handling
- Policy servicing

Customers want **LESS** AI in:

- Targeted advertising

Top Customer Priorities

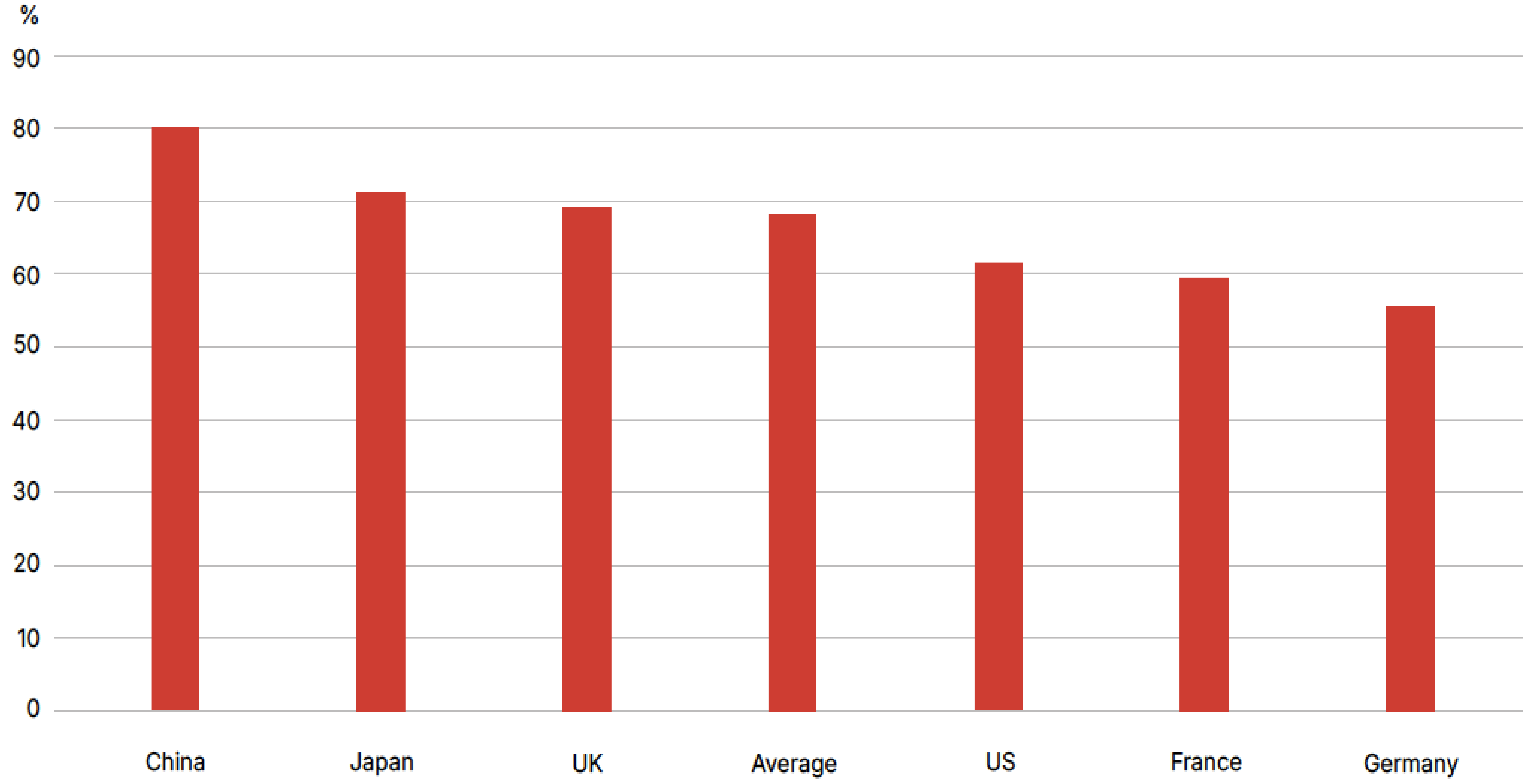
Trust-related factors dominate speed or cost.



The Independent Use of Gen AI

68% **of respondents have used tools like ChatGPT or Copilot when purchasing insurance.**

Have you used Gen-AI-powered tools like ChatGPT or Copilot while purchasing insurance?



Source: Geneva Association insurance customer survey

Empowered Customers Change Market Dynamics

Off-the-shelf AI reduces:
•Information asymmetry
•Search costs
•Dependence on agents and brokers

Customers become:
•Better prepared
•More analytical
•More demanding

Reducing Information Asymmetry

Customers compare products and decode complex language in real-time.

“Confusopoly” is dead. Products must be transparent to withstand AI scrutiny.

Concerns and Challenges

	Top 3 concerns	
Insurer-provided Gen AI	Lack of human touch	▪ top concern (nearly 40% respondents), more pronounced in the Europe and the U.S
	Privacy and security	▪ 35% respondents unwilling to share personal data
	Accuracy and transparency	▪ The “black box” nature and “hallucinations”
Independent use of off-the-shelf Gen AI	Quality and reliability	▪ Model bias, reliability of information and advice generated
	Privacy	▪ Misuse or leakage of sensitive personal data leaking.
	Cybersecurity risks	▪ Phishing, identity theft, and hidden vulnerabilities

Human Touch

Data Privacy

Accuracy

Transparacy

The Hallucination Risk and Mitigation Strategies

Gen AI is probabilistic, not deterministic.

Risks:

- Incorrect policy interpretation
- Fabricated exclusions
- False confirmation of coverage

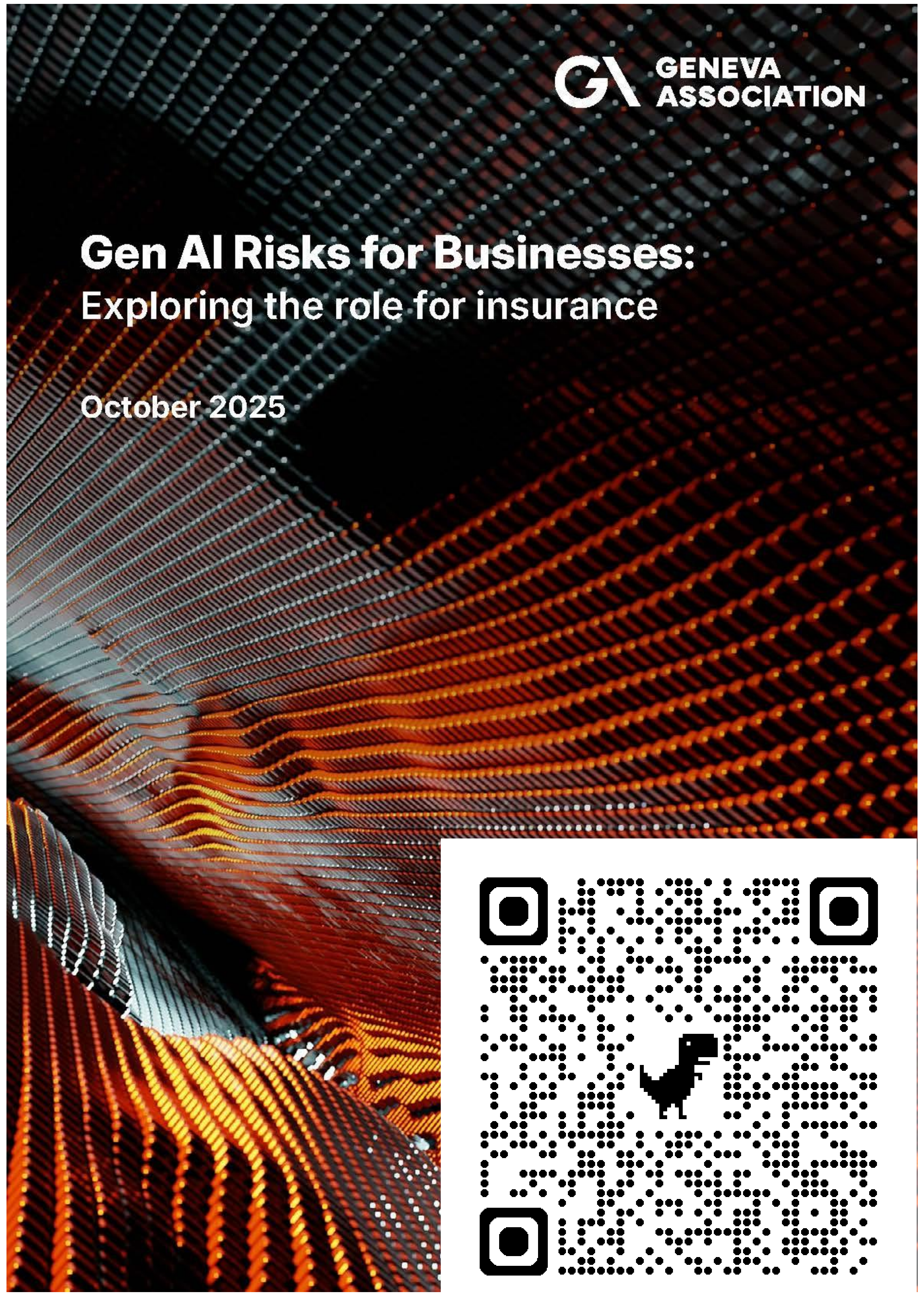
Consequences:

- Legal liability
- Regulatory penalties
- Reputational damage

RAG (Retrieval-Augmented Generation)

User Query → Retrieve Verified Doc (Policy) → Generate Answer based ONLY on Doc → Accurate Output

Geneva Association Gen AI and insurance report series



Report 1: Gen AI Risks for Businesses: Exploring the role for insurance (published on 2 October, 2025)

Report 2: Gen AI in the Insurance Customer Journey (published on 20 November, 2025)

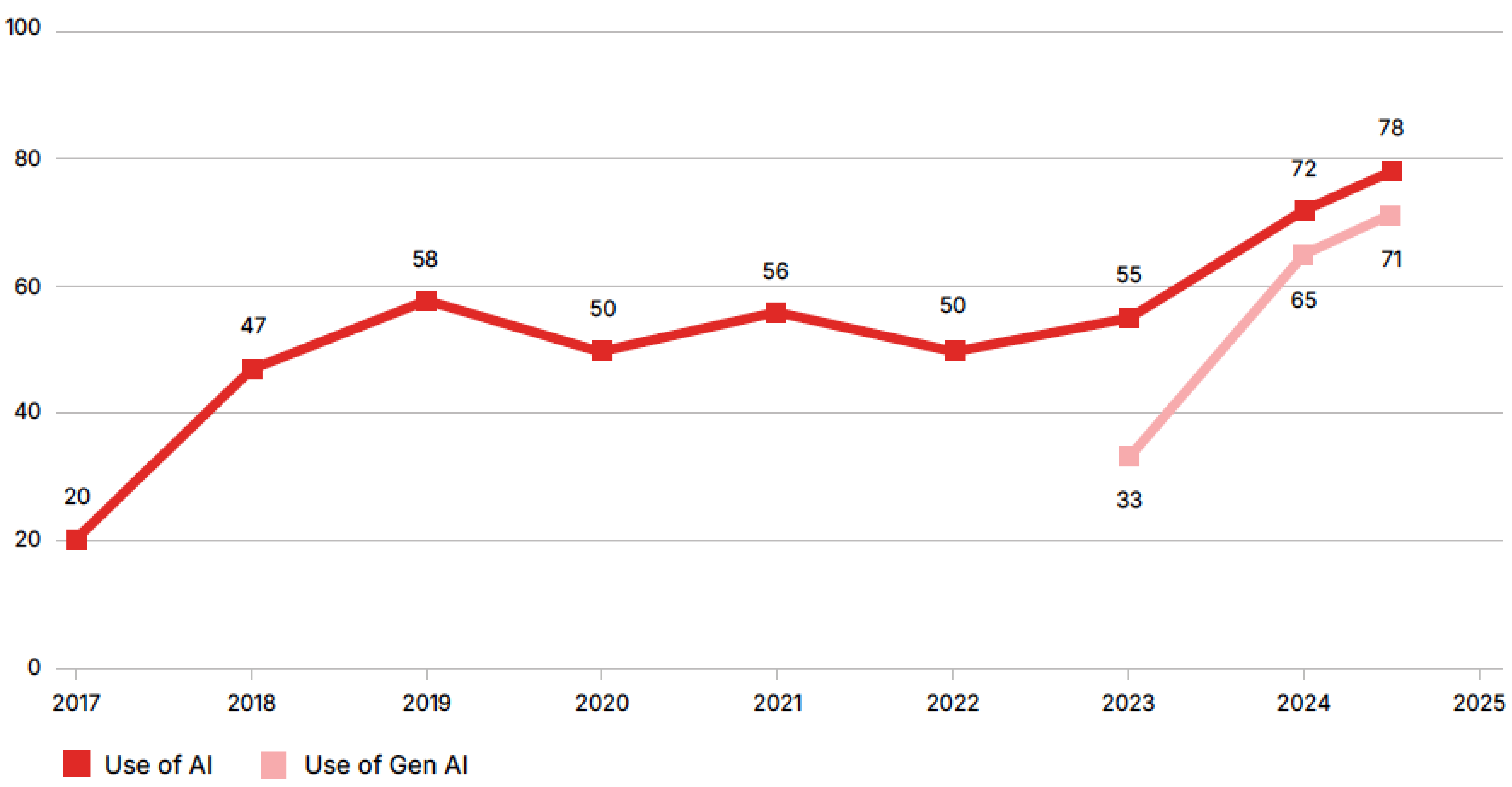
Rapid Adoption by Businesses

Adoption is accelerating globally.

•71% of firms use Gen AI in at least one function (2025)

•Up from 33% in 2023

Organisations that use AI in at least one business function, % of respondents*



* In 2017, the definition for AI use was using it in a core part of the organisation's business or at scale. In 2018–19, it was embedding at least one AI capacity in business processes or products. Since 2020, it is that the organisation has adopted AI in at least 1 function.

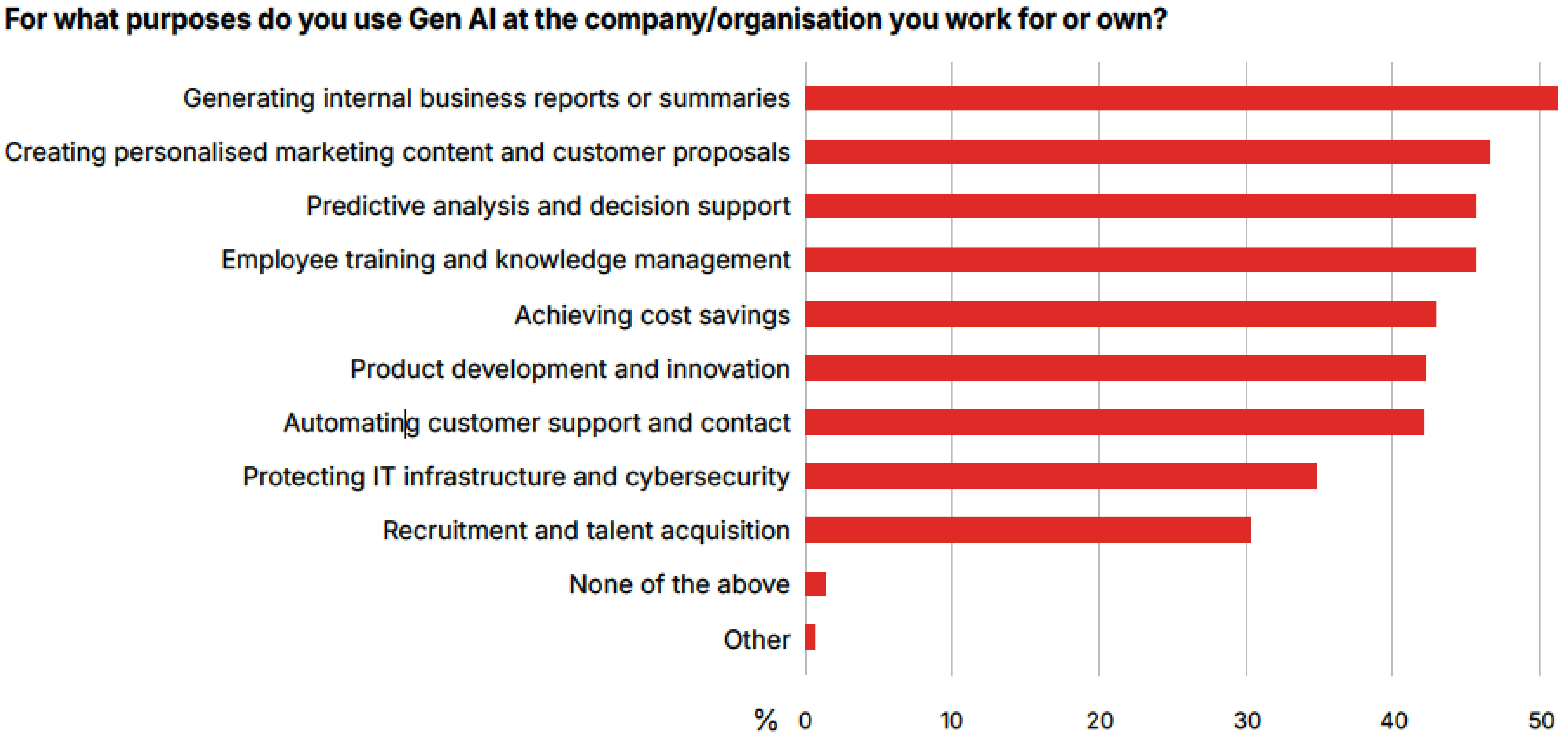
Source: McKinsey[6]

Seven risk categories identified for Gen AI

- Operational, privacy & cybersecurity, ethical, regulatory, reputational, workforce, ESG

	Risk Category	Specific Risk
First-party operational risk	Operational	Algorithmic Errors; Stability; Reliability
		Black-Box Issues
		Malicious Attack
	Cybersecurity & Privacy	AI-driven Cyberattacks
		Data Privacy Violations
	Reputational & Market	Customer Trust and Brand Image
		Dependency & Competitive Risk
	Workforce Challenges	Job Displacement
		AI Skill Requirements
First-party operational risk +Third-party product risk	Regulatory & Compliance	Evolving AI Regulations
		Accountability and Liability
	Bias & Ethical Concerns	Discrimination and Bias
		Ethical Decision-Making
	ESG	Environmental and Energy

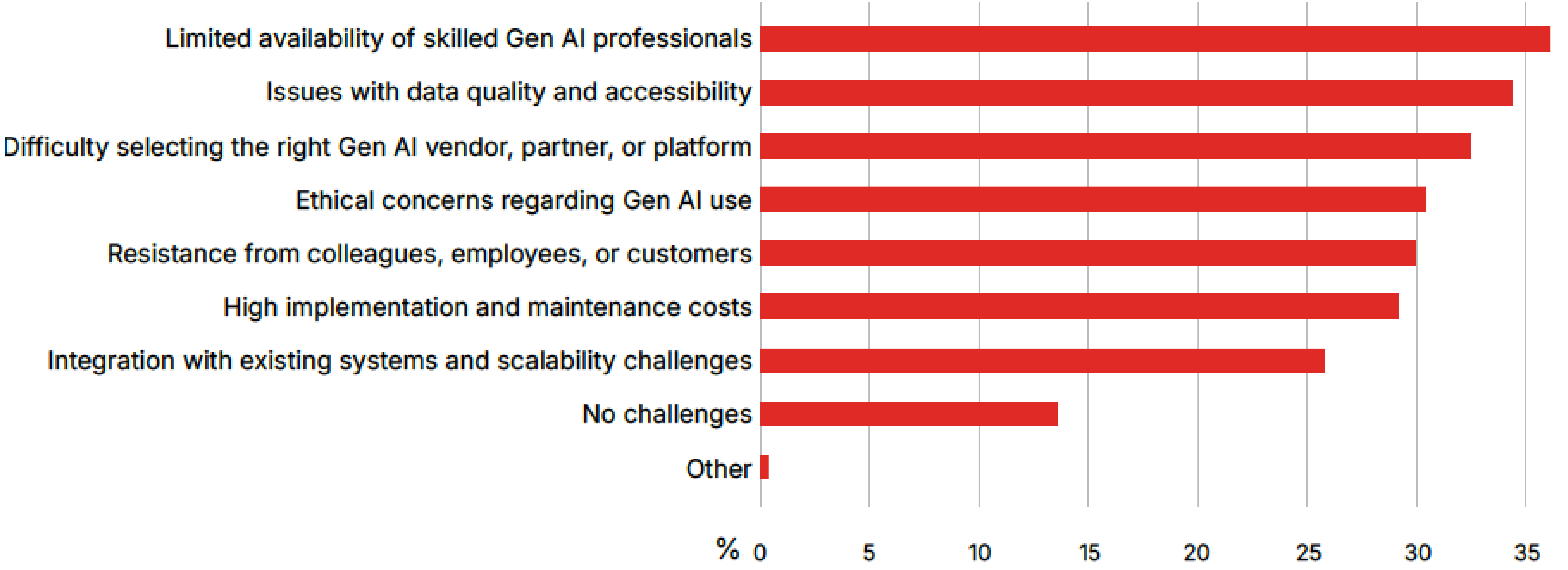
How Firms Use Gen AI



Source: Geneva Association business insurance customer survey

Implementation Challenges

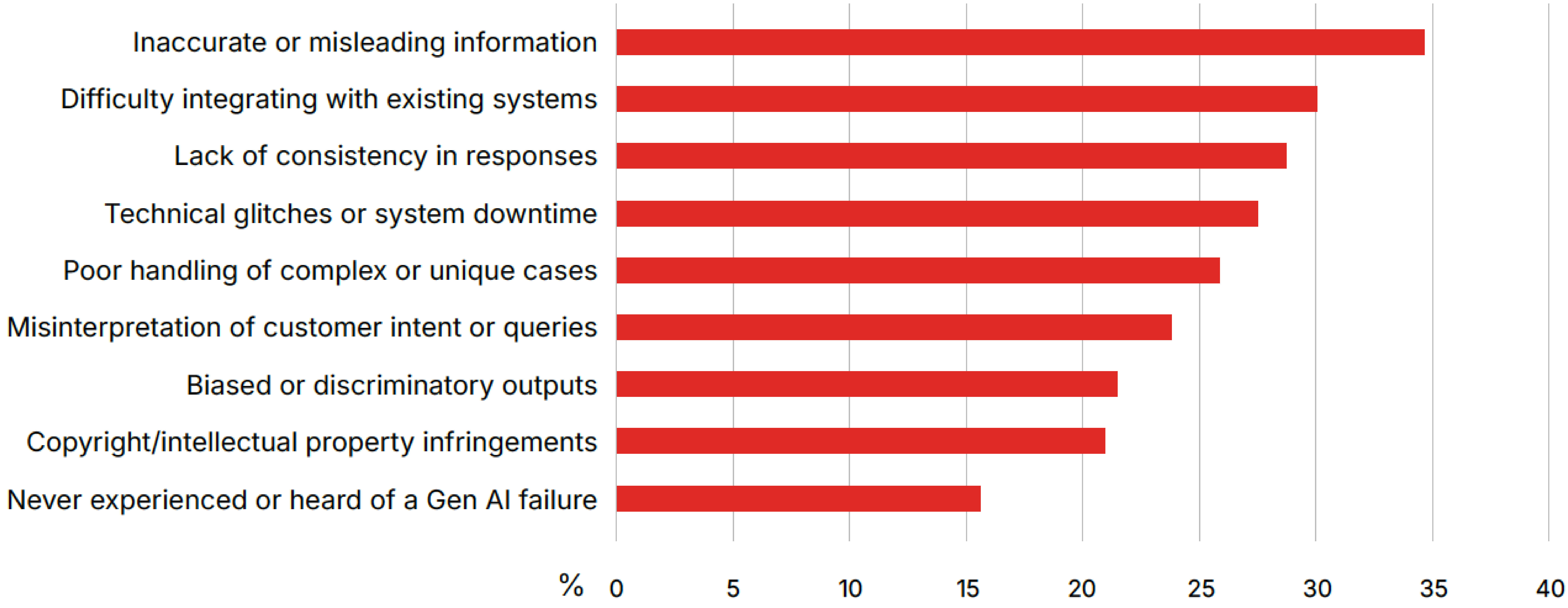
What challenges have you encountered/do you anticipate when implementing Gen AI at the company/organisation you work for or own?



Source: Geneva Association business insurance customer survey

Failures & Incidents

What type(s) of failures or issues have you experienced or heard about when using Gen AI in the company/organisation you work for or own?

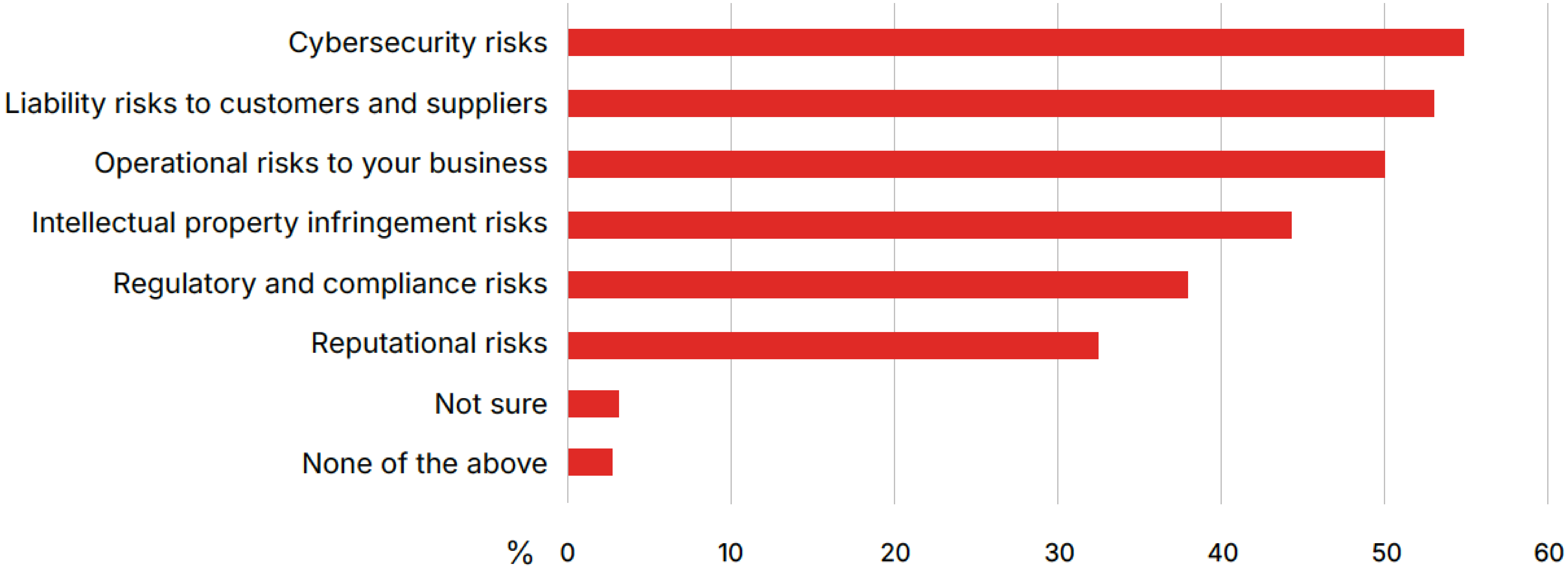


Source: Geneva Association business insurance customer survey

Demand for Gen AI Insurance

FIGURE 7: GEN AI RISKS BUSINESSES WANT TO INSURE

What Gen-AI-related risks do you want covered by your insurance?



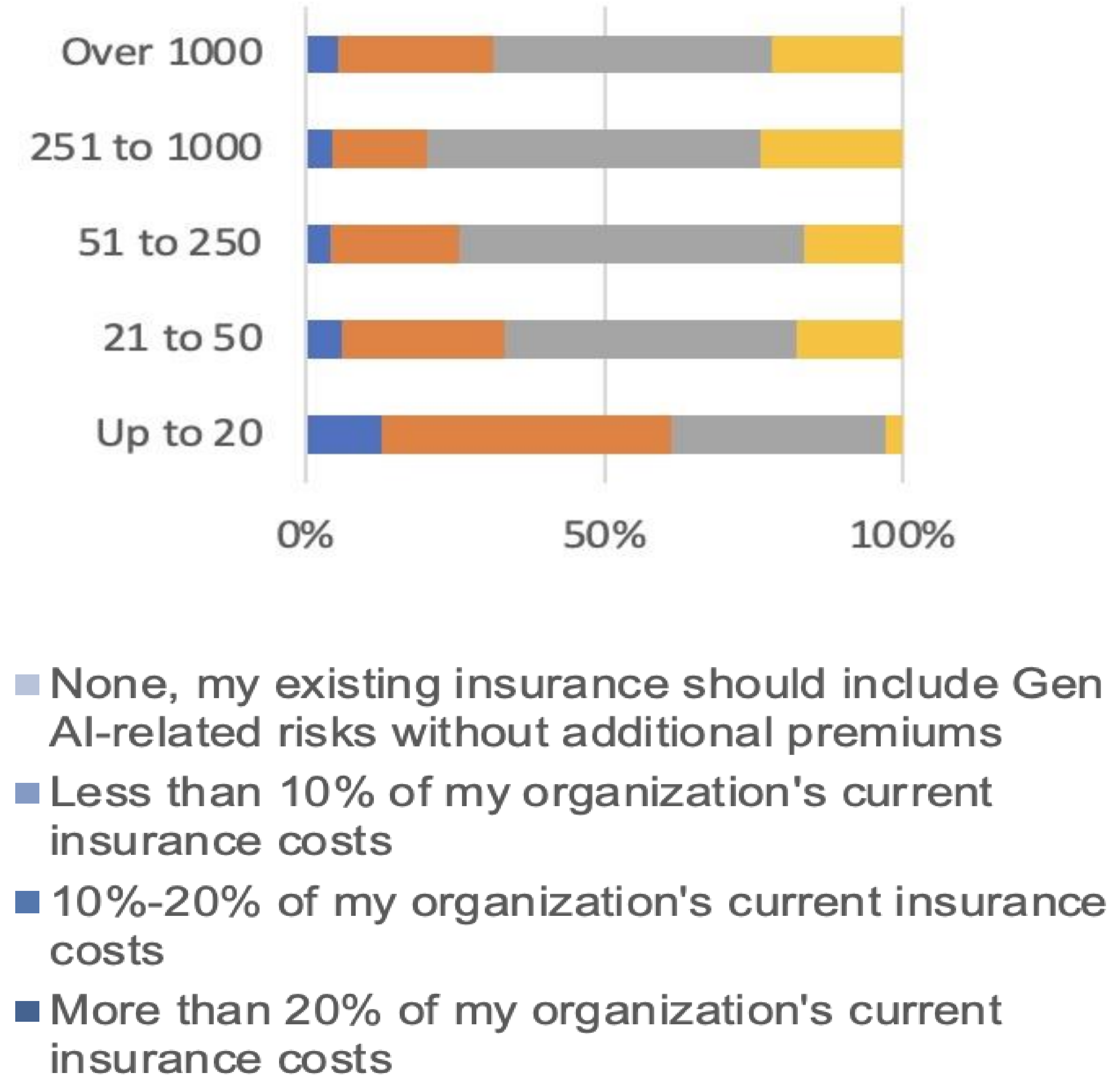
Source: Geneva Association business insurance customer survey

Demand for Gen AI Insurance

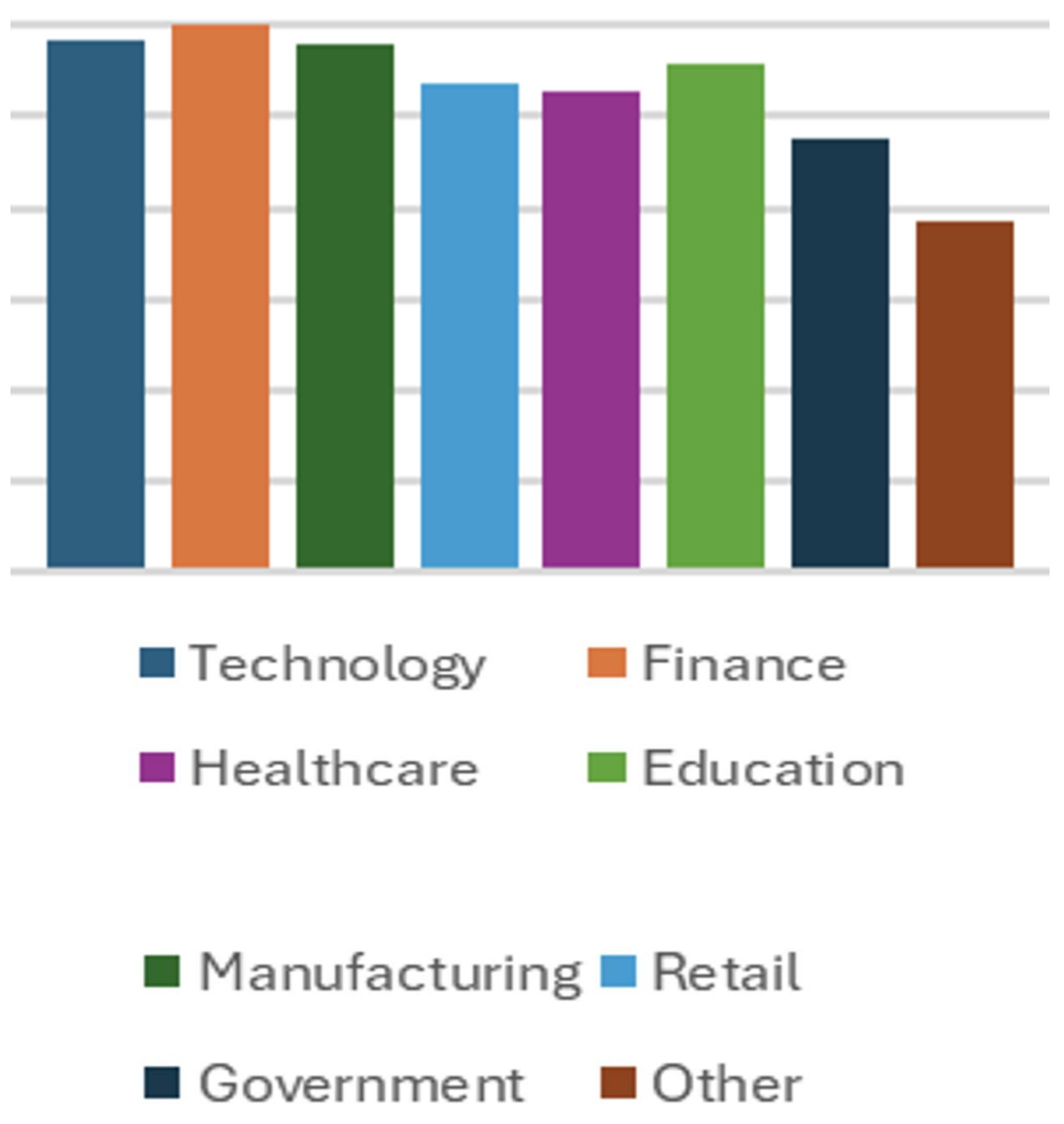
- Demand is strongest in the technology and finance sectors, among medium-to-large firms, and in markets with high Gen AI adoption
- Firms with high Gen AI exposure and severe past failures show higher insurance demand, suggesting potential adverse selection

- From whom is Gen AI insurance in high demand

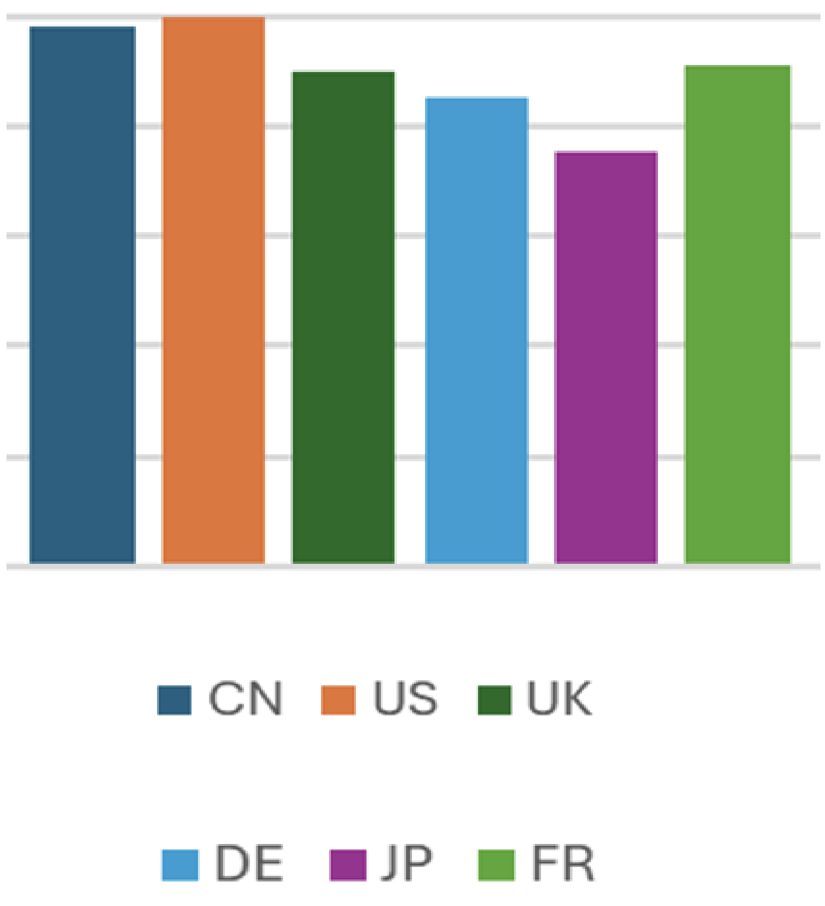
Business size



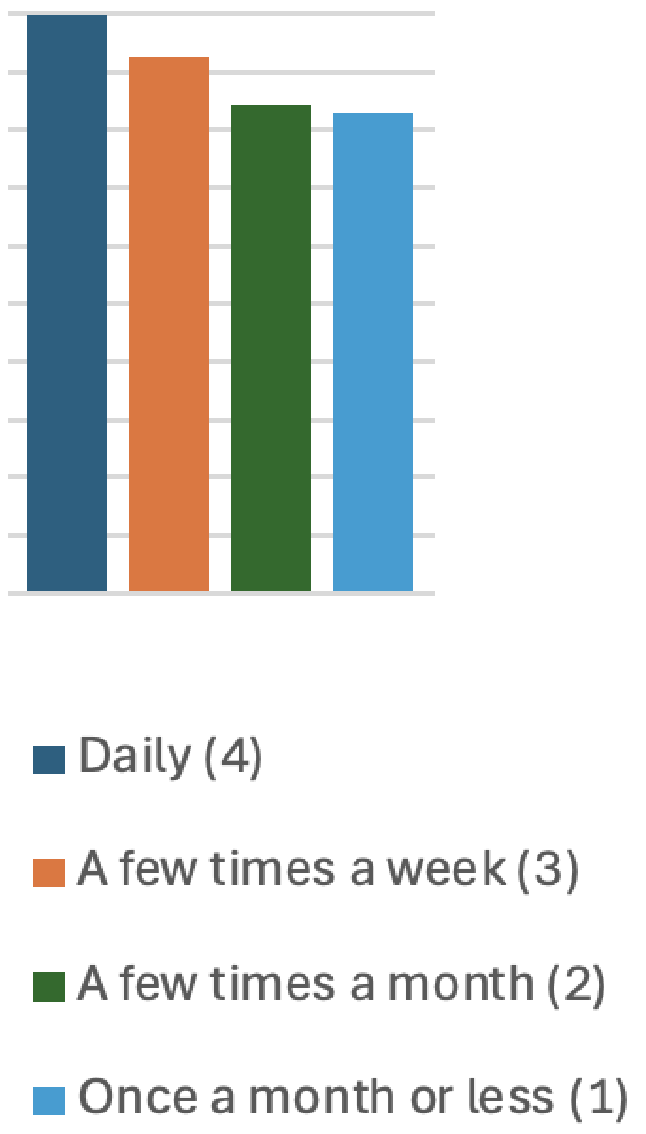
Industries



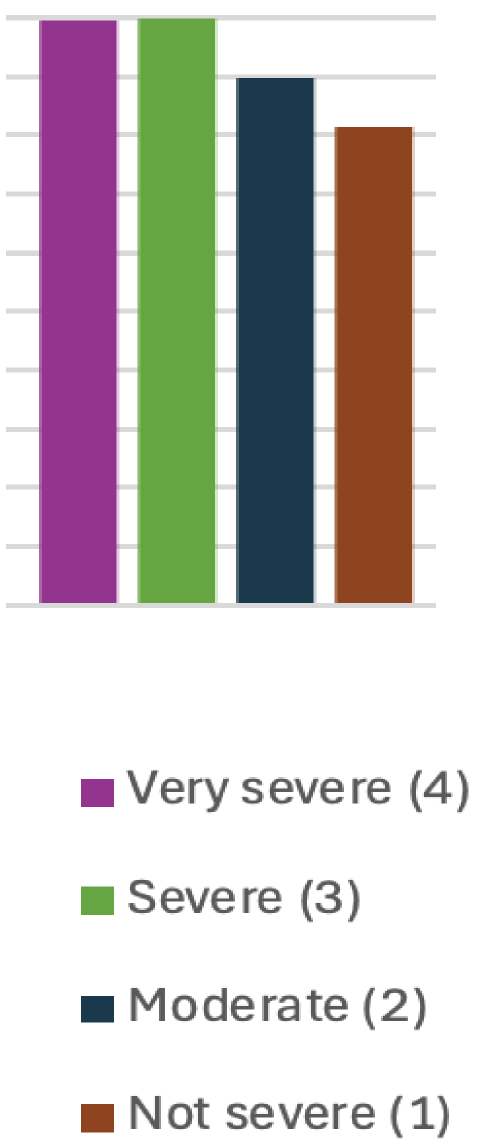
Across markets



Risk exposure



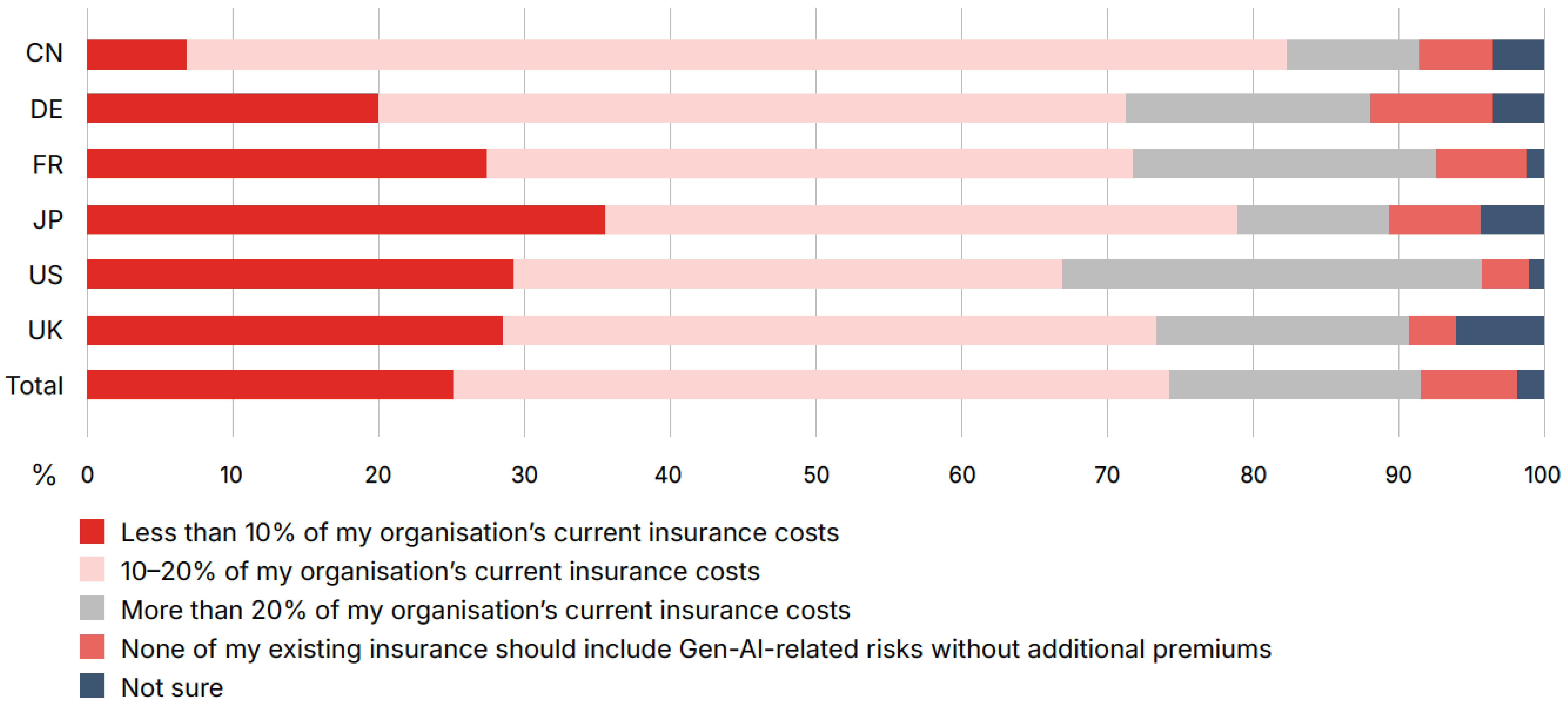
Failure severity



Willingness to Pay

FIGURE 8: WILLINGNESS TO PAY FOR GEN AI INSURANCE

How much extra would you be willing to pay for Gen-AI-related coverage?



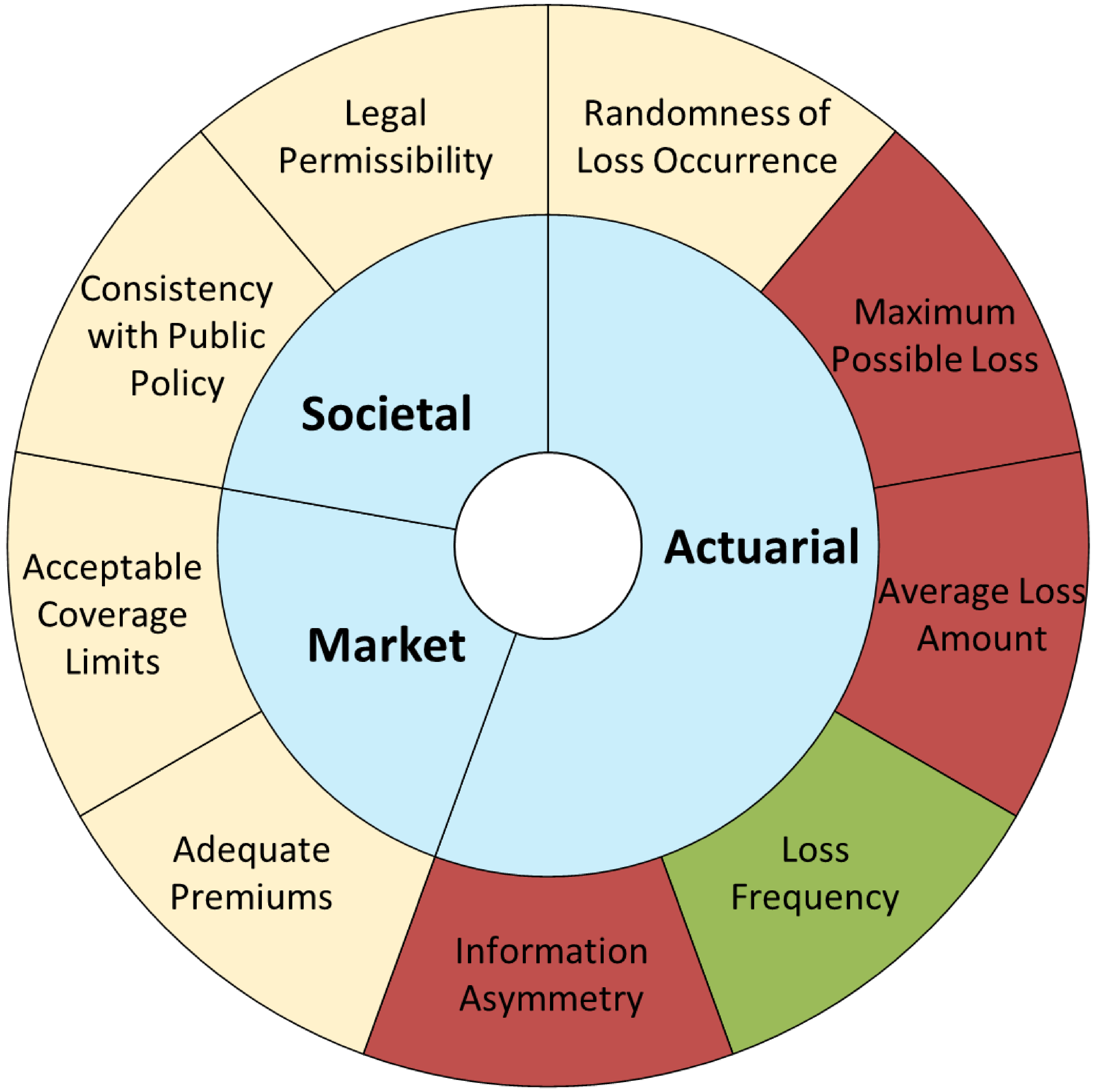
Source: Geneva Association business insurance customer survey

Supply of Gen-AI-related insurance

Insurability of Gen-AI-related risks

- Critical challenges for Gen AI:
  - Maximum possible loss
  - Average loss amount
  - Information asymmetry

- Mirrors the early evolution of cyber insurance



Source: Geneva Association

Emerging insurance solutions

- Gen-AI-related risks and associated coverage are still at an early stage but are expected to expand
- Effective Gen AI risk management requires a broad toolkit – a balanced approach combining risk avoidance, mitigation, retention, and transfer

Type of coverage	Description
Cyber insurance	Covers losses due to enhanced vulnerability of IT systems, as businesses and attackers use Gen AI tools, including data breaches, hacking, or model manipulation.
Professional liability (E&O)	Protects against claims arising from errors in Gen AI outputs, like the generation of misleading or harmful information.
Directors' & officers' liability	Protects directors and officers from legal action due to Gen-AI-related decisions or oversight failures.
Intellectual property	Protects against claims related to Gen AI's use of copyrighted or patented materials without permission.
Product liability	Covers claims due to harm caused by Gen AI outputs (e.g. misinformation, discrimi-natory content) or failure to perform as expected.
Dedicated, standalone AI insurance	Comprehensive, standalone coverage bundling multiple Gen-AI-specific exposures into a single policy.

Ruo (Alex) Jia 贾若
ruo.jia@pku.edu.cn
alex_jia@genevaassociation.org