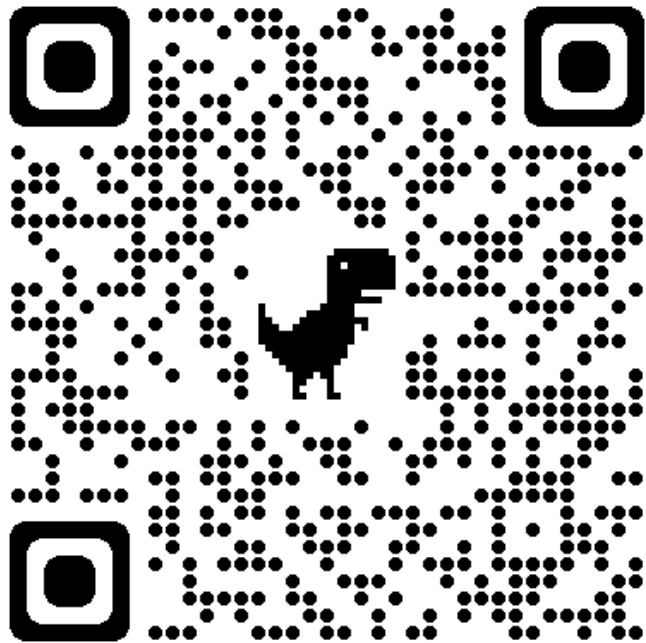


# Emerging Risks Poll

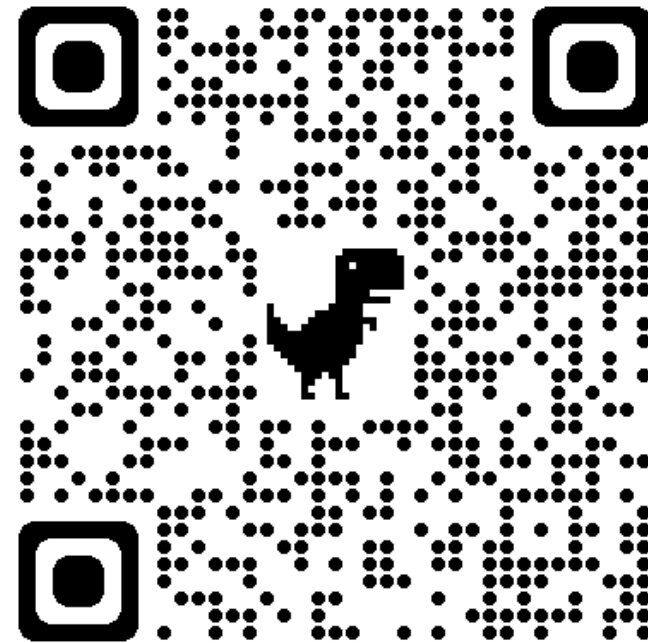
Severity

[allourideas.org/CAS-ER1](https://allourideas.org/CAS-ER1)



Frequency

[allourideas.org/CAS-ER2](https://allourideas.org/CAS-ER2)



# Antitrust Notice

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# Identifying Emerging Risk While Differentiating Unknown Unknowns with Elephants in the Room

Dave Ingram

Bill Wilkins

Bob Wolf





# Identifying Emerging Risk While Differentiating Unknown Unknowns with Elephants in the Room

May 10<sup>th</sup>, 2023



**Known Unknown**



**Unknown Unknown**

Presented by:

William R. Wilkins, CERA, FCAS, ASA, MAAA  
Vice President, Chief Risk and Analytics Officer  
Safety National Casualty Corporation

# The Emerging Risk Timeline

(or why something can be emerging for multiple decades)

- 1) The item that catches your attention & you say, hey is this something we should worry about?
- 2) A risk is clearly identified, but the cause and/or scope of damage is not yet reasonably determinable.
- 3) A long known risk has now gained more prominence due to changing environmental, societal or financial conditions.

Example: SMOG

- (1) The Term SMOG was first used in 1880 in the Bay Area. If you read any of the early articles, several people thought it was something to worry about. Throughout the first half of the 20<sup>th</sup> Century, there were numerous deaths reported specifically due to SMOG, but the industrial revolution churned on.
- (2) However, until the 1950's the largest source (automobiles) was not identified. In the late 1960's and early 1970's actions are taken, such as the US Clean Air Act. Per the UN Environment Program Air today is significantly better than the 1990s.
- (3) However, today's Climate Change discussion has again brought the focus of SMOGs main ingredient hydrocarbons and the work that remains to be done.



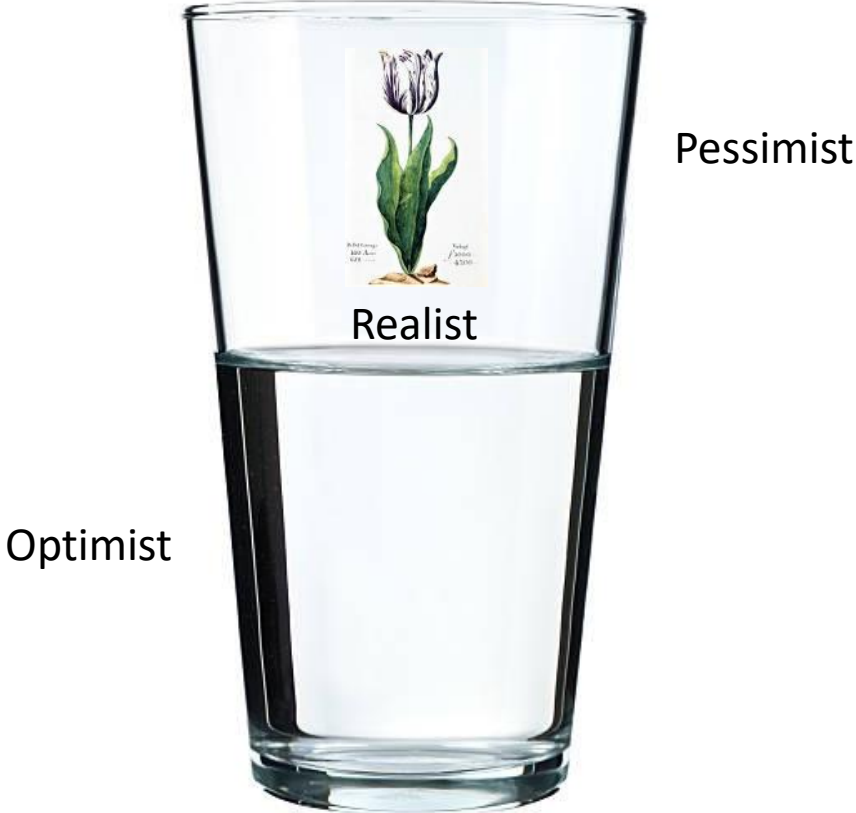
# Why do Risks get missed?



The lack of

- 1 balance between Optimism, Pessimism and Realism – human behavioral issues;
- 2 foresight by those in the best position to generate change; and

# Optimism, Pessimism and Realism (Its all Relative)



# Lack of Foresight



The Standard in Photography Film for over 100 Years





# Lack of Foresight



The 1975 Digital Camera



Today's Digital Camera





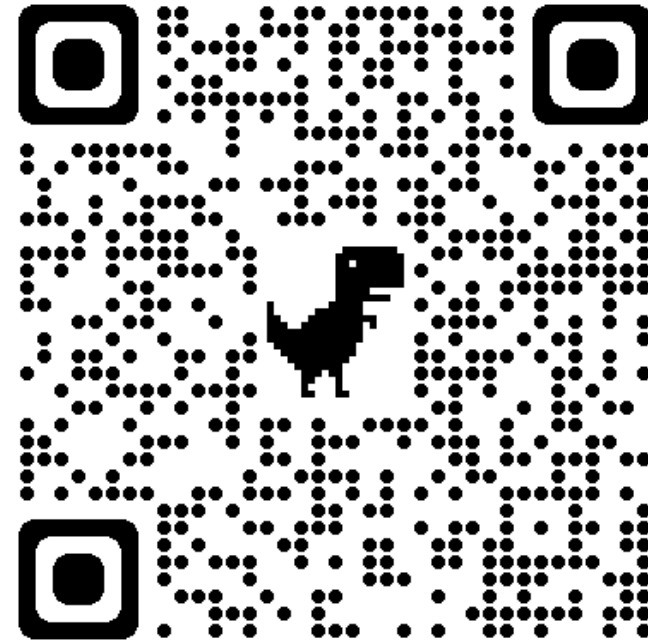
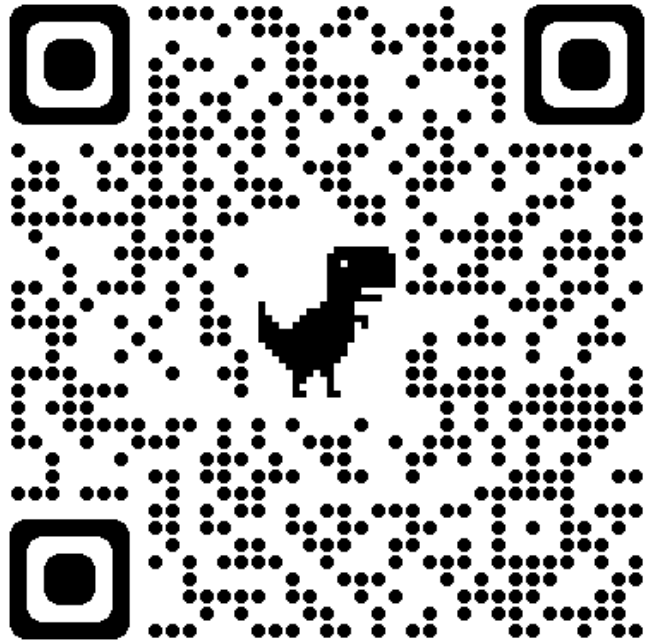
# Emerging Risks Poll

Severity

[allourideas.org/CAS-ER1](https://allourideas.org/CAS-ER1)

Frequency

[allourideas.org/CAS-ER2](https://allourideas.org/CAS-ER2)





## Which emerging risk is likely to cause greater losses for insurers?

Ideas	Score (0 - 100)
Chronic diseases/medical delivery—Diseases such as obesity, diabetes, cardiovascular, and substance abuse	83
Pandemics/infectious diseases	83
Biodiversity collapse: Destruction of the world's ecosystem, problems with human food and water supplies, disease	82
Climate change—Change in climate patterns generates both extreme events and gradual changes	80
Banking crisis: Banks have insufficient liquidity to make payments, causing banking and eventually real economic activity to stop.	75
Asset price collapse—The value of assets such as housing and equities collapses.	75
Demographic shift - (age, size, race, migration, skills)	71
Stagnation: A prolonged period of little or no economic growth with high unemployment	67
Terrorism—Attacks lead to disruption, catastrophic economic losses, and/or high human loss of life.	67
Financial volatility—Price instability and extremes of sectors, including commodities, equities, or interest rates.	

## Which emerging risk is more likely to occur and cause losses for insurers?

Ideas	Score (0 - 100)
Regional instability—Unstable regions cause widespread political and other crises.	75
Automotive technology: Autonomous vehicles, hydrogen power and other technologies	75
Solar Storms	67
Liability regimes/regulatory framework—increases in the spread and size of litigiousness and regulatory revisions. Material changes in tax ...	67
Global trade collapse: A protectionist backlash against cross-border mobility of labor, goods and capital, causing global trade to collapse.	67
Energy price shock—Price instability and extremes of energy prices.	67
Transnational crime and corruption	50
Terrorism—Attacks lead to disruption, catastrophic economic losses, and/or high human loss of life.	50
Super volcano	50
Stagnation: A prolonged period of little or no economic growth with high unemployment	50

# Top Emerging Risks

(in this room today)

## Severity

- 1.
- 2.
- 3.
- 4.
- 5.

## Frequency

- 1.
- 2.
- 3.
- 4.
- 5.

# 16<sup>th</sup> Survey of Emerging Risks

Study performed by Max Rudolph, FSA, CERA, CFA

Presented by Dave Ingram, CERA, FRM, PRM

# Emerging Risks

## **Time horizon**

- Beyond tactical plans (at least 5-10 years)

## **New**

- Never happened before (e.g., disruptive technology)

## **Evolving**

- Risk is changing (e.g., climate change)

# Survey of Emerging Risks

- **Annually since 2008 – 16<sup>th</sup> survey in Fall 2022**
- **Sponsored by Joint Risk Management Section**
- **Mix of quantitative trended results and qualitative assessments**
- **16<sup>th</sup> survey**
  - **Survey November 2022**
  - **Key Findings report February**
  - **Full report – soon**
  - **Tableau tools – soon**

# Survey of Emerging Risks - Five Categories

- **Economic**
- **Environmental**
- **Geopolitical**
- **Societal**
- **Technological**



# Survey of Emerging Risks

## 23 Risks (Slide 1 of 2)

### **Economic**

- Energy price shock
- Currency shock
- Emergent nation destabilization
- Asset price collapse
- Financial volatility

### **Environmental**

- Climate change
- Freshwater loss
- Tropical storms
- Earthquakes
- Severe weather

# Survey of Emerging Risks

## 23 Risks (Slide 2 of 2)

### **Geopolitical**

- Terrorism
- Weapons of mass destruction
- Wars
- Failed and failing states
- Transnational crime
- Globalization shift
- Regional instability

### **Societal**

- Pandemics
- Chronic diseases/ medical delivery
- Demographic shift
- Liability regimes/ regulations

### **Technological**

- Cyber/networks
- Disruptive technology

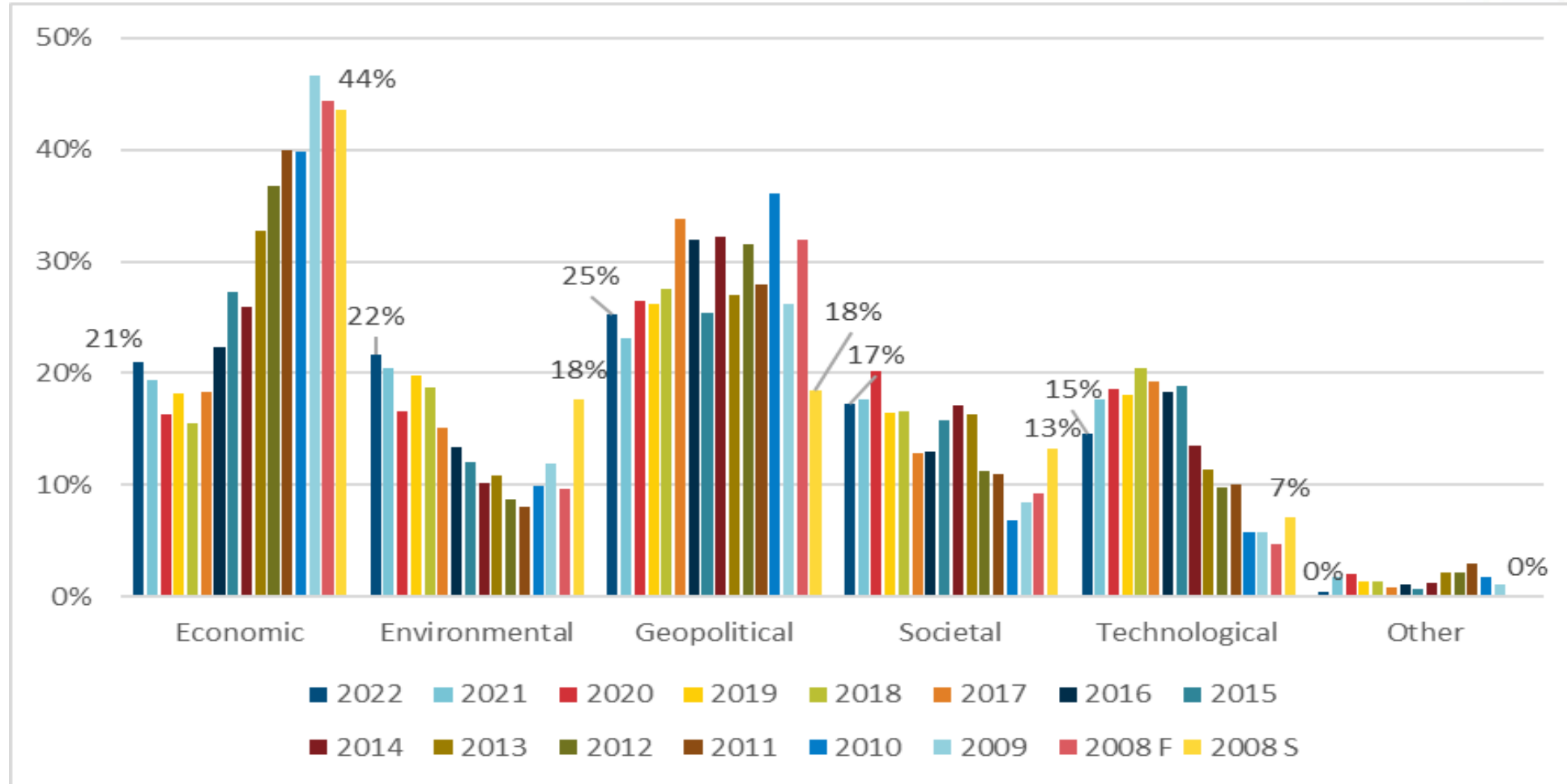
# Preview of Key Findings

- Climate change, Wars and Financial volatility concerns rising
- Pandemic concerns fading
- Economic risks trending up
- Deteriorating expectations for 2023 global economy
- Staffing is still a challenge

# Top Current Risks 2022

- **Financial volatility (21% up from 10%)**
- **Climate change (14% down from 16%)**
- **Wars (including civil wars) (13%)**
- **Asset price collapse (8%)**
- **Energy price shock (8%)**
- **Cyber/networks (8%)**

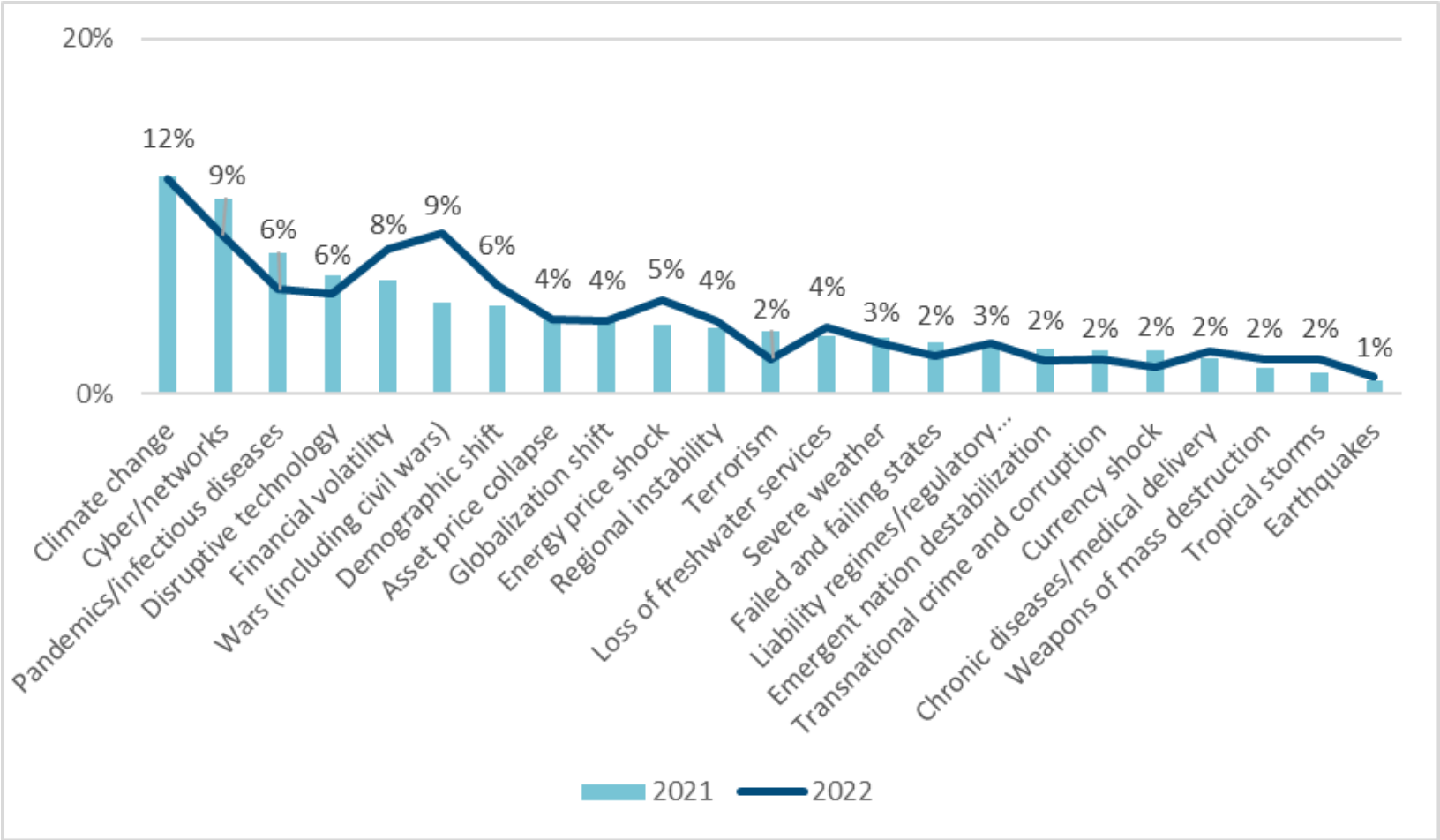
# Historical Trends



# Top Five Emerging Risks - Historical

	2022	2021	2020	2019
1	Climate change	Climate change	Climate change	Climate change
2	Wars (including civil wars)	Cyber/networks	Cyber/networks	Cyber/networks
3	Cyber/networks	Pandemics/infectious diseases	Pandemics/infectious diseases	Disruptive technology
4	Financial volatility	Disruptive technology	Disruptive technology	Demographic shift
5	Demographic shift	Financial volatility	Financial volatility	Financial volatility

# Top Five Emerging Risks

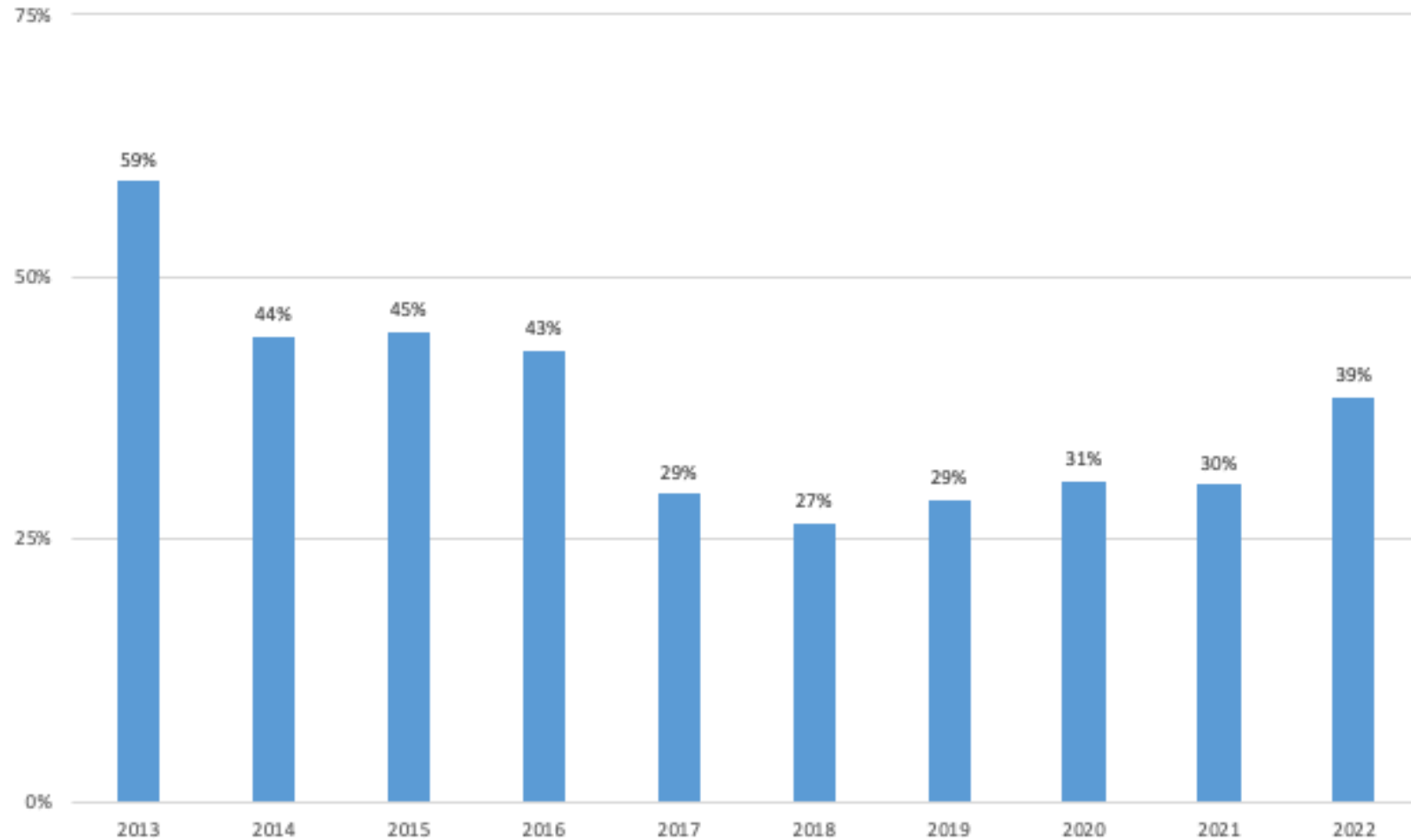


# Top Emerging Risks 2022

- **Climate change (28%) – up 2%**
- **Financial volatility (15%) – up from 7% two years ago**
- **Demographic shift (8%)**
- **Cyber/networks (7%) – down from 13%**
- **Asset price collapse (6%)**
- **Wars (including civil wars) (6%)**
- **Globalization shift (6%)**



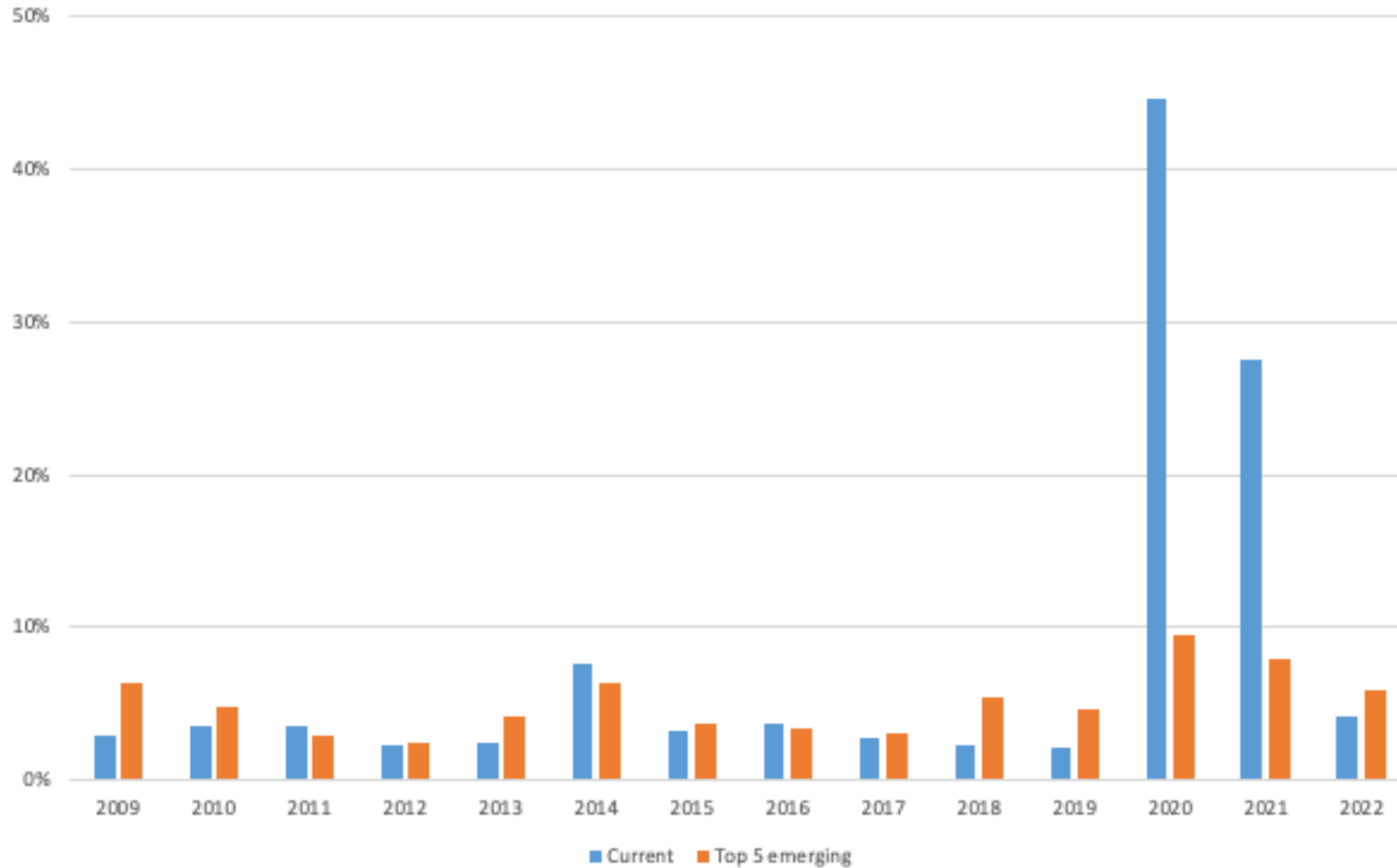
# Financial Volatility as Top Emerging Risk



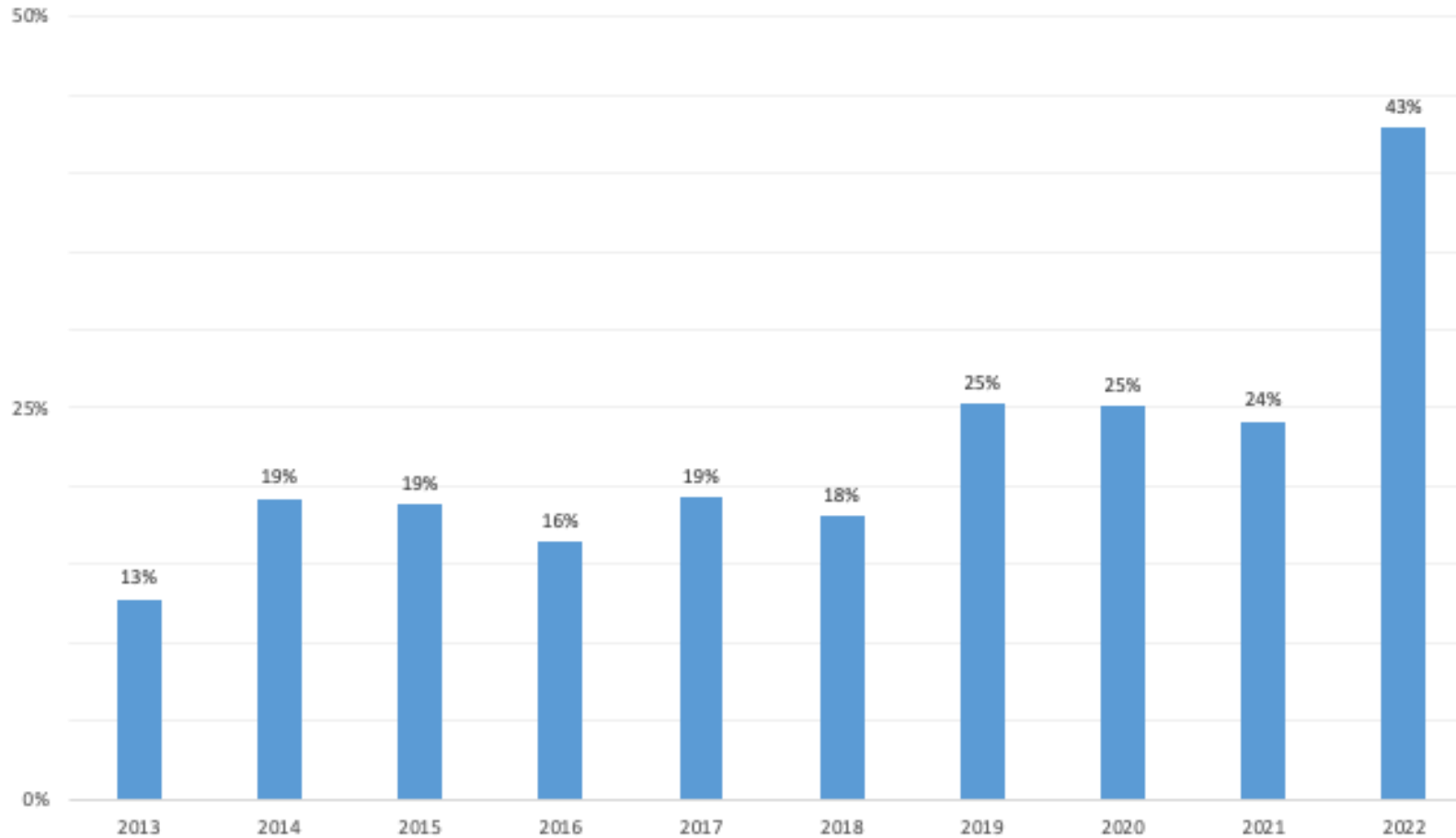
# Top Risks in Combination 2022 (threat multipliers)

- Financial volatility (11%) – up from 8%
- Climate change (11%) - unchanged
- Wars (including civil wars) (10%) – up from 7%
- Asset price collapse (7%)
- Cyber/networks (6%)

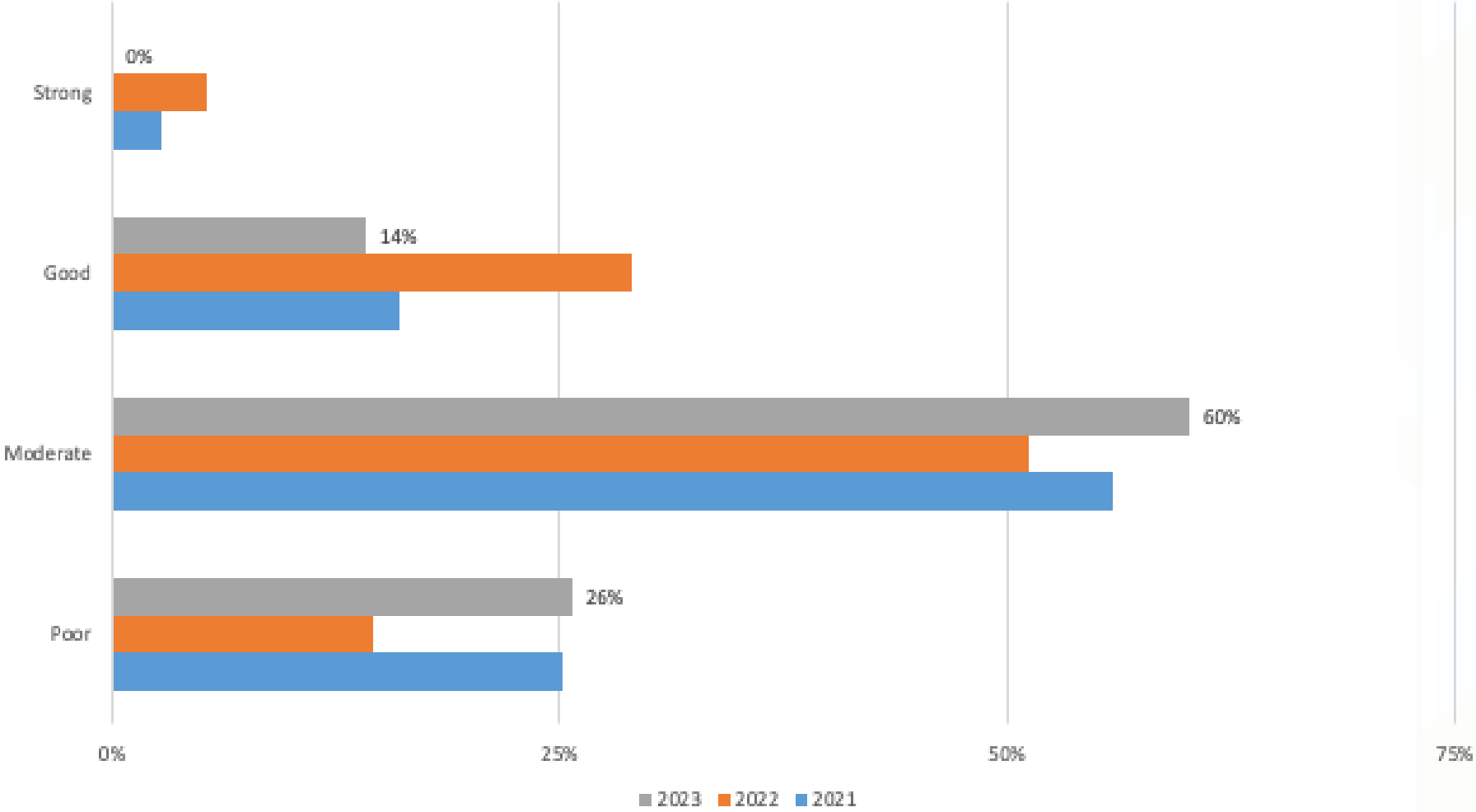
# Pandemic risk



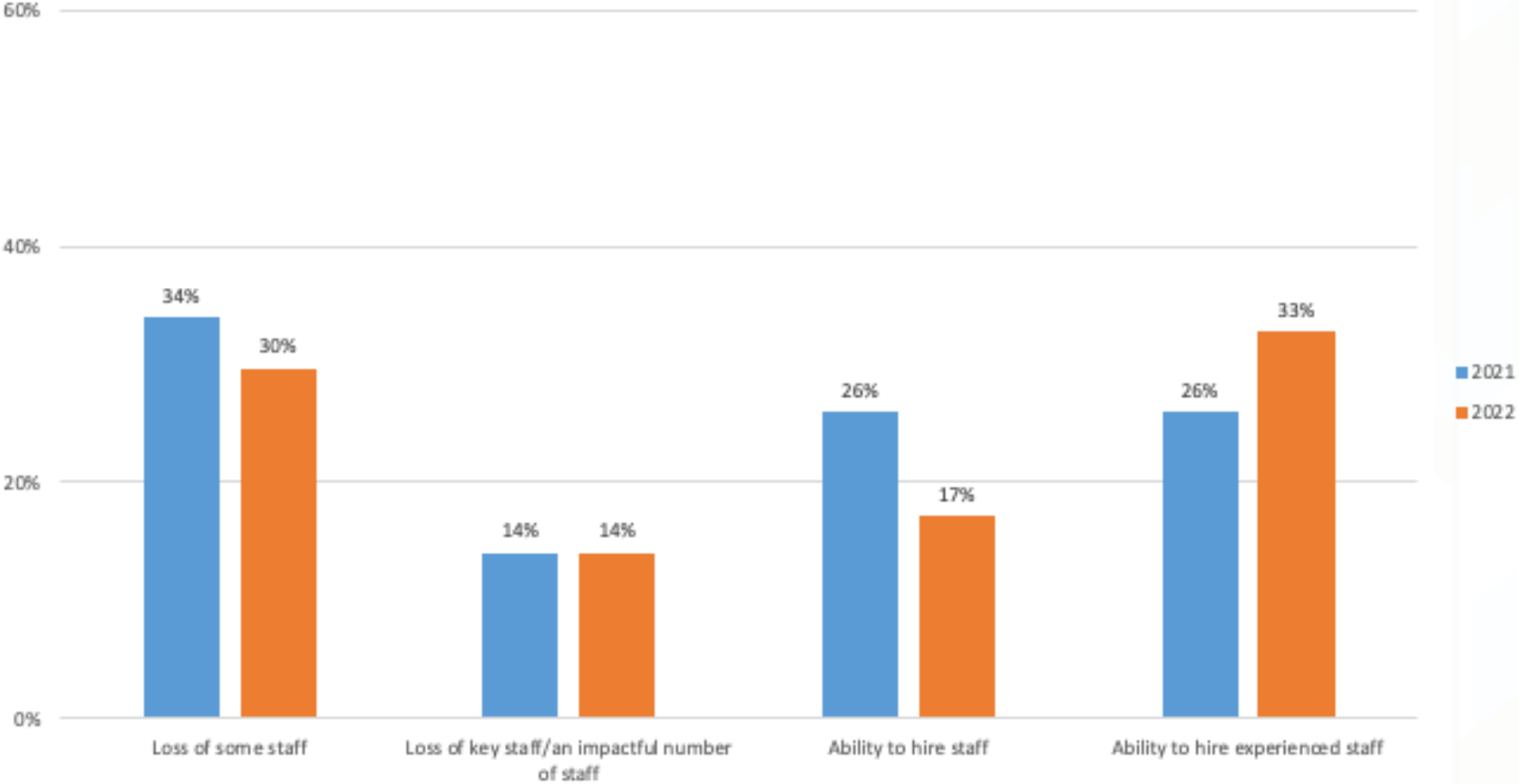
# Wars (including civil wars)



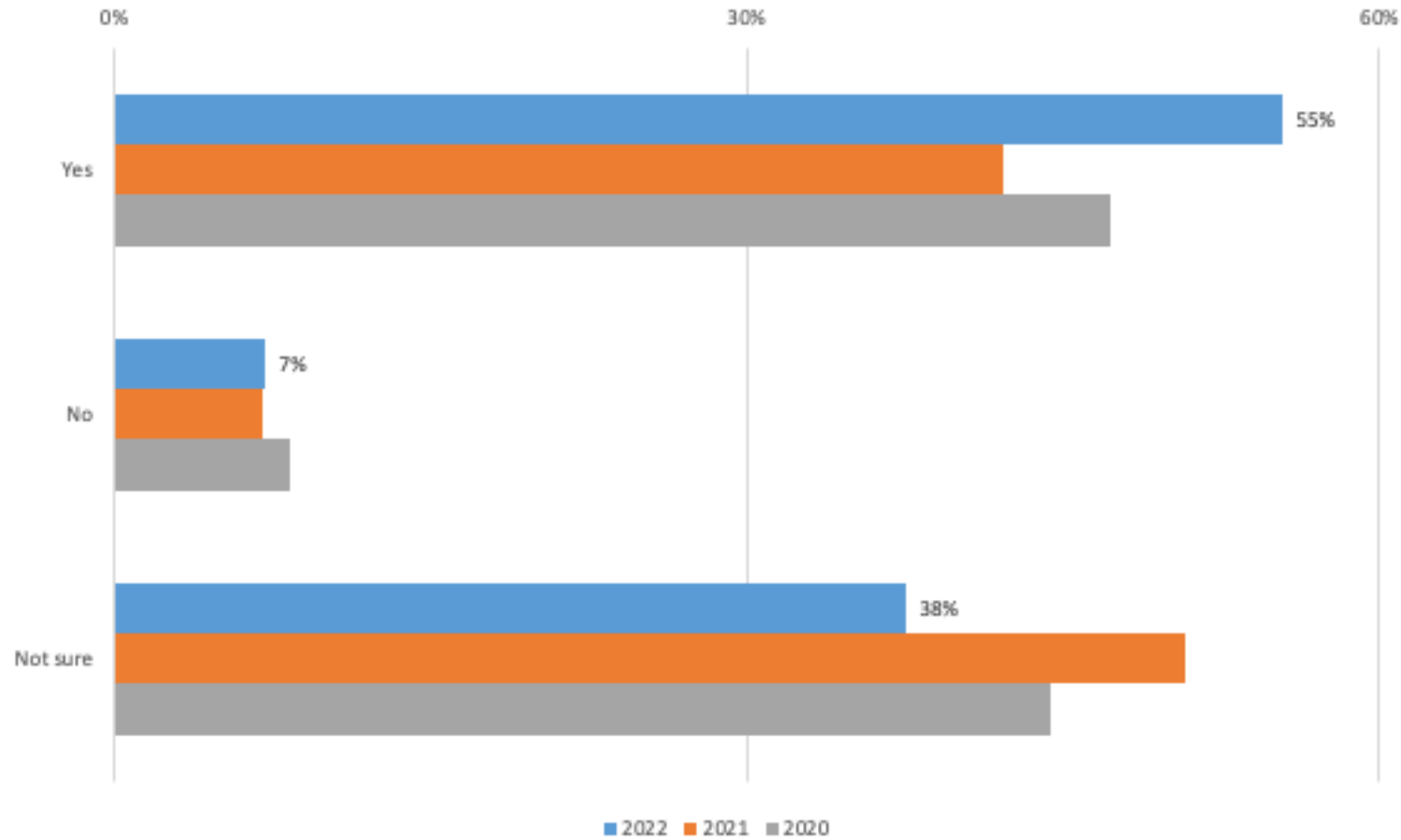
# Global Economic Expectations



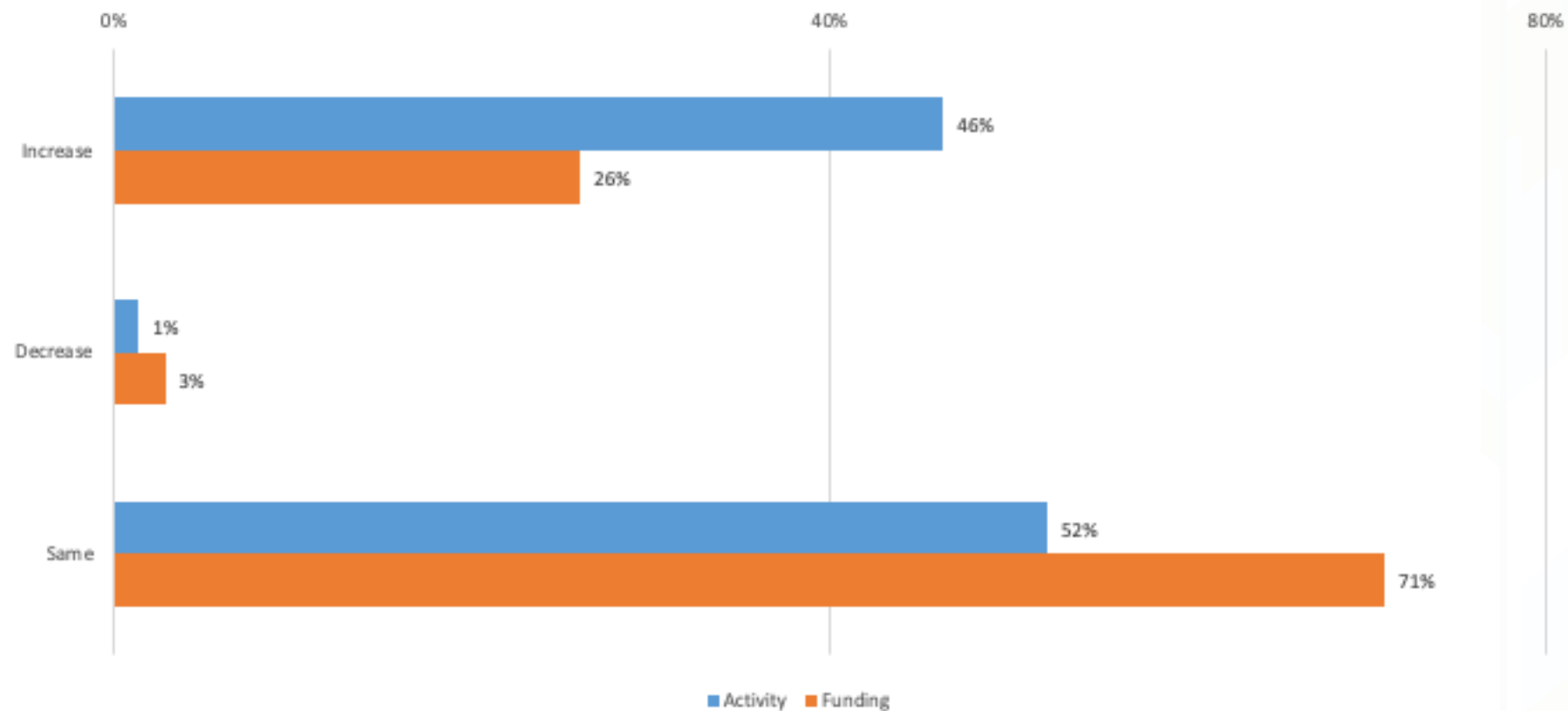
# Great Resignation



# Does ERM Improve Returns Relative to Risk?



# Anticipated 2023 ERM Activity & Budget Business as Usual





# To access surveys/articles/podcasts

- **Emerging Risk Survey (16)**

<https://www.soa.org/resources/research-reports/2023/16th-survey-emerging-risks/>

- **Emerging Risk Survey (15) - Key Findings, full report, tableau tool**

<https://www.soa.org/resources/research-reports/2022/15th-survey-emerging-risks/>

<https://www.casact.org/sites/default/files/2022-08/15th-survey-emerging-risks.pdf>

<https://www.cia-ica.ca/publications/publication-details/rp222113>