

**NAVIGATE.
PREDICT. LEAD.**



**SPRING
MEETING**

May 7–10, 2023

The Westin Boston Seaport District
Boston, MA

State of the Insurance Market

May 8, 2023 – CAS Spring Meeting

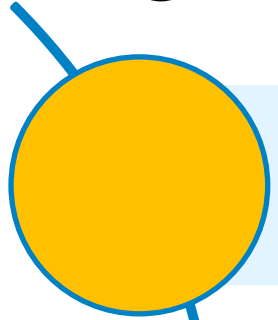
Presented by: Brian Z. Brown, FCAS, MAAA, ARM
Principal and Consulting Actuary – Milliman, Inc.

Matthew Mosher, FCAS, MAAA, CERA
President & CEO – AM Best

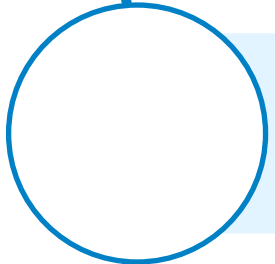
Benoit Carrier, FCAS, MAAA
Managing Director – AON



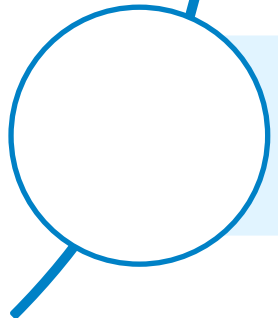
Agenda



What's changing?



Why does it matter?



What does this mean to you?

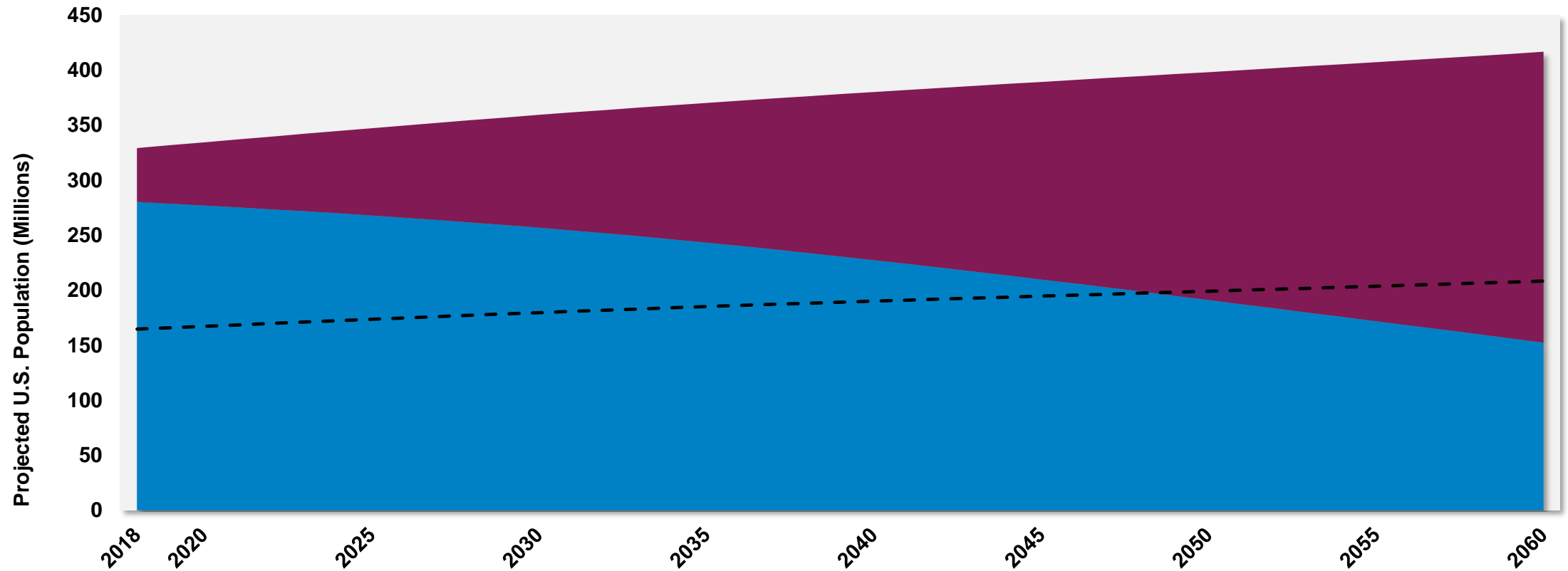
Key Changes

Demographic Shifts



Increasing Comfort with Technology

Projected US Population Born After the Launch of the iPhone (2007)



Source: US Census Bureau

■ Born in 2007 or Later

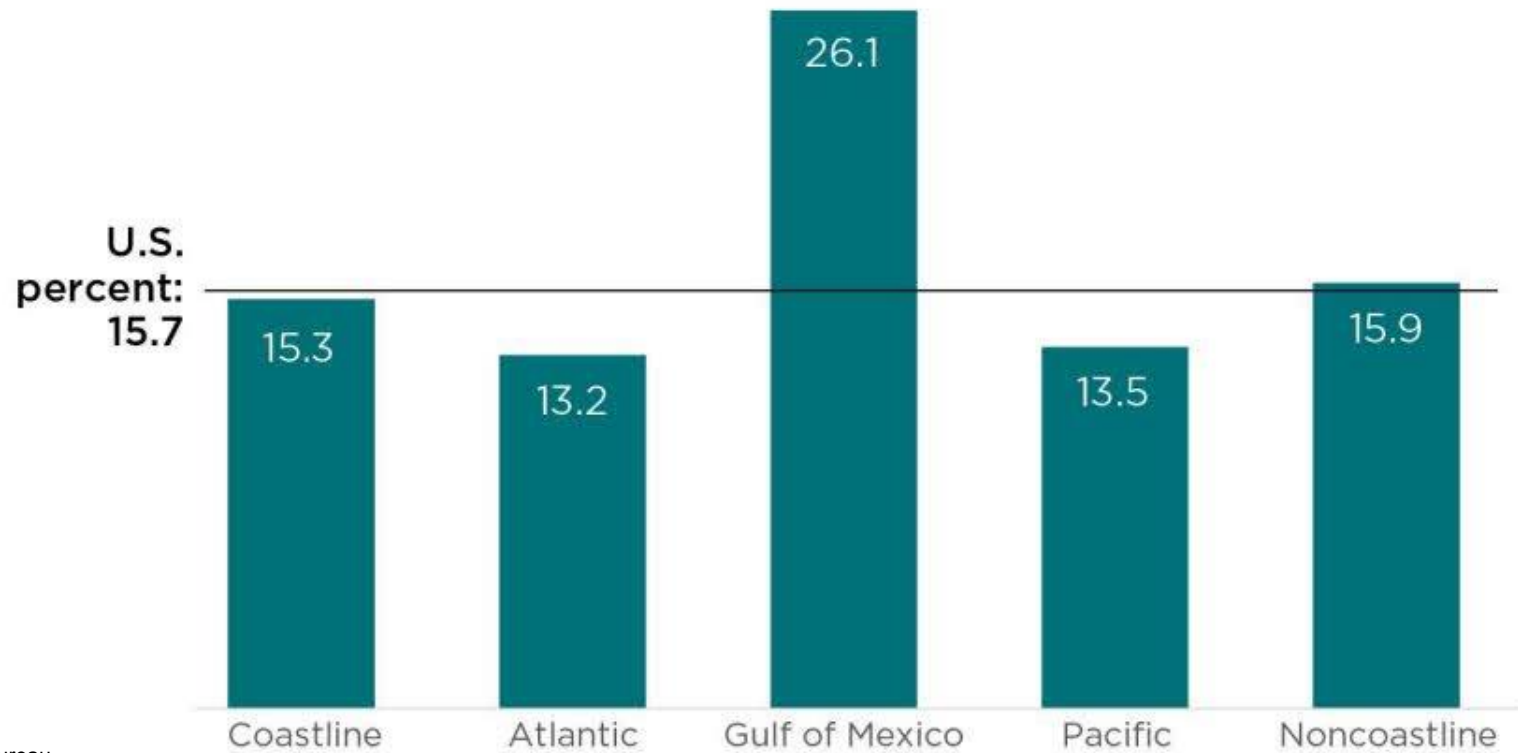
■ Born Before 2007

-- 50% of Population



Migration to Coastal Regions...

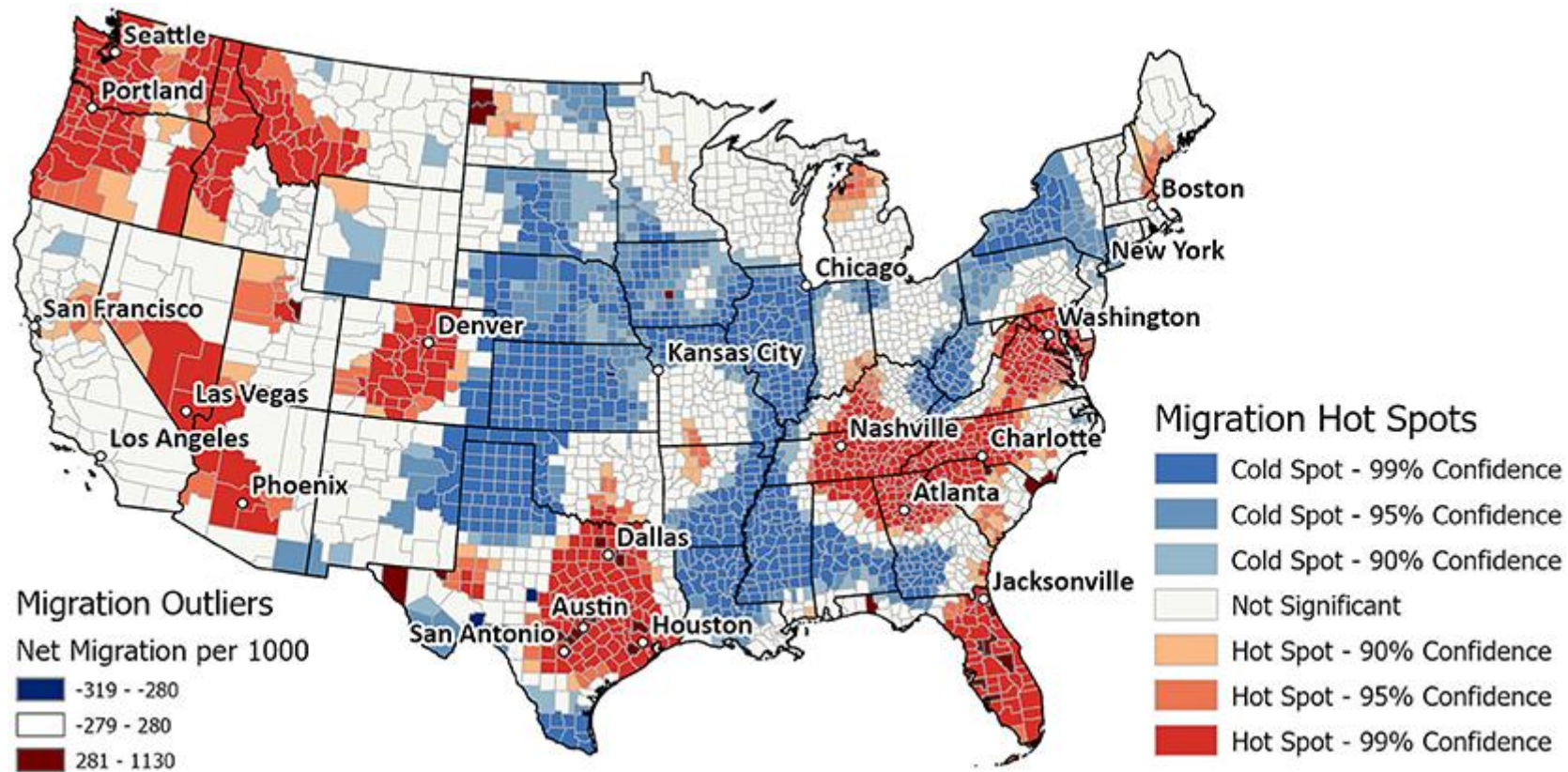
Percentage Change in Population by Coastline Region: 2000 to 2017



Source: US Census Bureau



Migration to Wildfire-Prone Areas



Source: Flocking to fire: How climate and natural hazards shape human migration across the United States



Key Changes

Demographic Shifts

Climate- Related Trends



Increasing Frequency and Severity of Weather Events

Select Time Period Comparisons of United States Billion-Dollar Disaster Statistics(CPI-Adjusted)

Time Period	Billion-Dollar Disasters	Events/Year	Cost	Percent of Total Cost	Cost/Year	Deaths	Deaths/Year
1980s (1980-1989)	33	3.3	\$209.2B	8.3%	\$20.9B	2,994	299
1990s (1990-1999)	57	5.7	\$319.5B	12.7%	\$32.0B	3,075	308
2000s (2000-2009)	67	6.7	\$592.0B	23.6%	\$59.2B	3,102	310
2010s (2010-2019)	131	13.1	\$948.5B	37.7%	\$94.9B	5,227	523
Last 5 Years (2018-2022)	90	18.0	\$607.2B	24.2%	\$121.4B	1,751	350
Last 3 Years (2020-2022)	60	20.0	\$443.4B	17.6%	\$147.8B	1,460	487
Last Year (2022)	18	18.0	\$171.5B	6.8%	\$171.5B	474	474
All Years (1980-2023)*	348	7.9	\$2,512.6B	100.0%	\$57.1B	15,858	360

**Statistics valid as of April 10, 2023*

Source: NOAA National Centers for Environmental Information (NCEI) U.S. Billion-Dollar Weather and Climate Disasters (2023)



Key Changes

Demographic Shifts

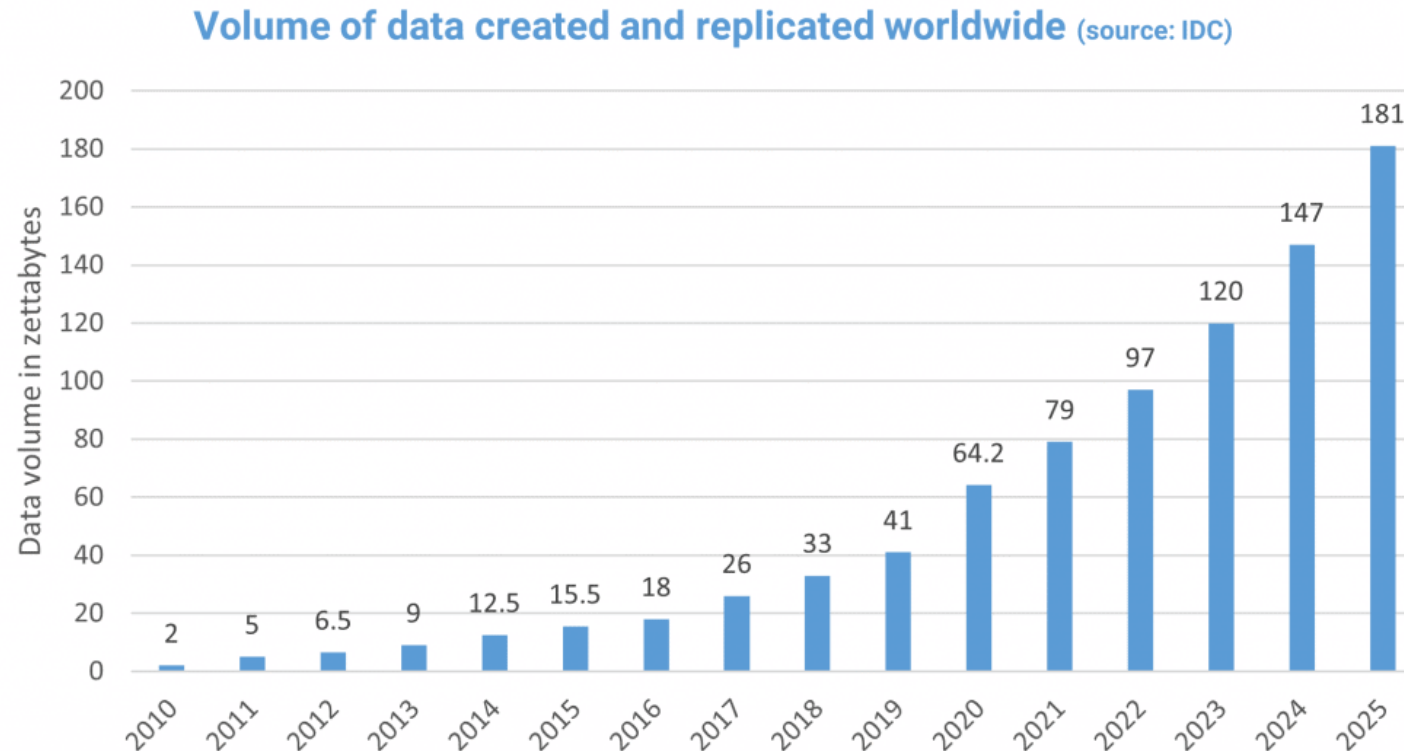
Technology

Climate- Related Trends



Explosion of Data

- Big Data, machine learning, and IoT are changing the way insurers approach risk, as analysis moves from proxy to source data
- Data generated from outside of insurance industry is attracting new entrants



Key Changes

Demographic Shifts

Capital Markets

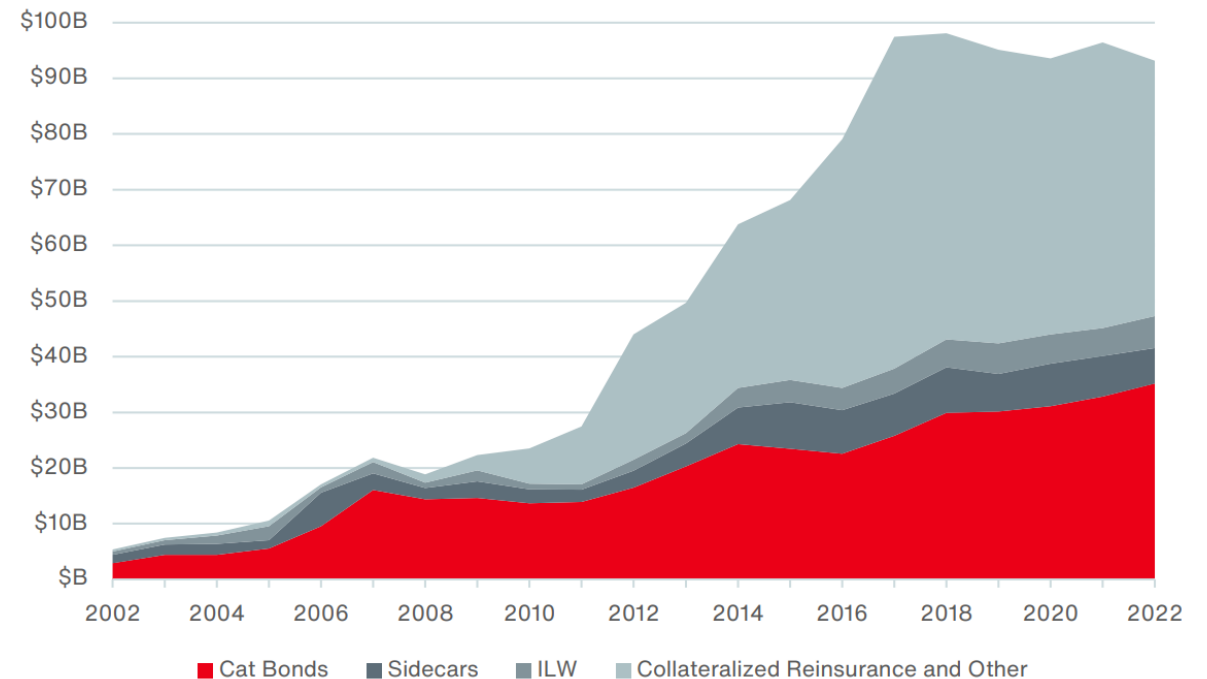
Technology

Climate- Related Trends



ILS Capacity Estimate by Segment

- ILS market capacity: \$96B (GC/AM Best); \$93B (AON)
 - Catastrophe bonds: \$35 billion**
 - Collateralized reinsurance: approximately \$45-\$49 billion**
 - Sidecars: approximately \$6-\$7 billion**
 - ILW: approximately \$5-\$6 billion**



**Excludes cat bonds projected to have losses; ranges based on AM Best's conversation with ILS managers



Key Changes

Demographic Shifts

Capital Markets

Technology

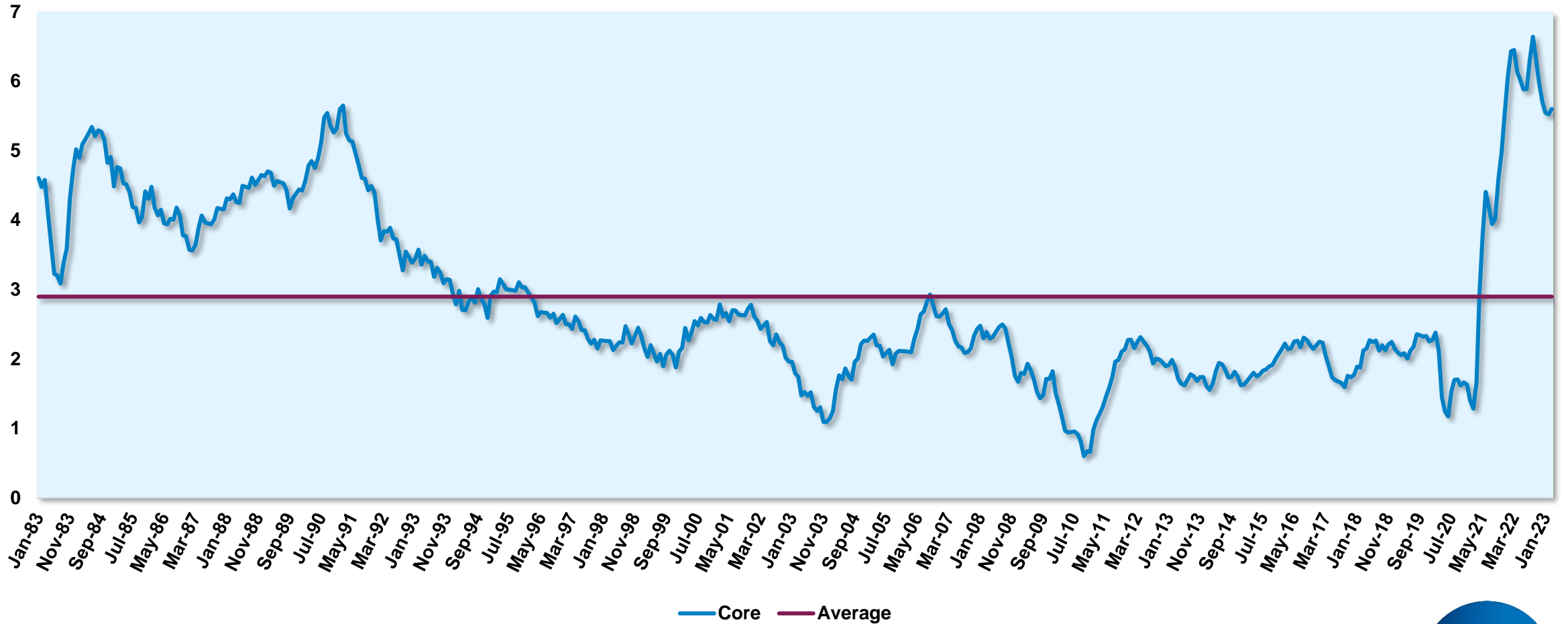
Climate- Related Trends

Inflation



Inflation Trends

Core Inflation



Key Changes

Demographic Shifts

Capital Markets

Technology

Climate- Related Trends

Social Norms

Inflation



Agenda



What's changed?

Why does it matter?

What does this mean to you?



Change Affected

General Changes

- Data
- Technology
- Speed of Innovation
- New Type of Insurance
- Alternative Risk Transfer

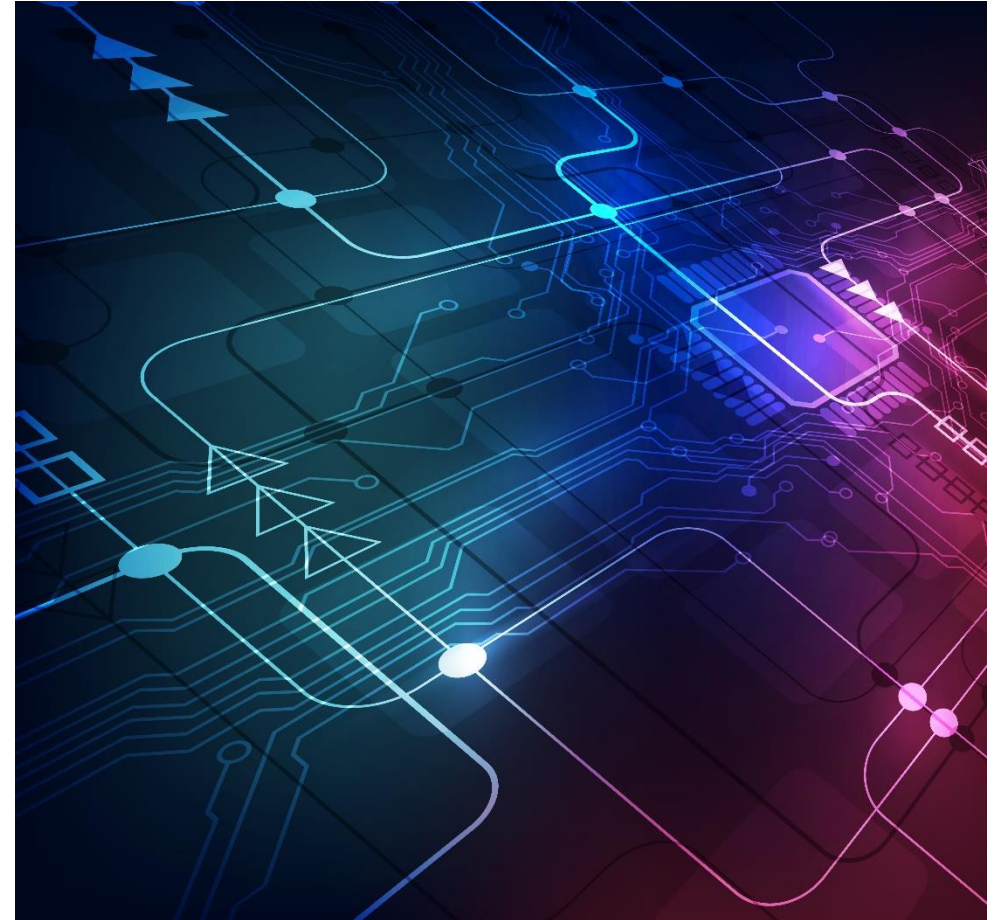
Specific Changes

- Telematics
- Predictive Modeling
- Regulation
- Loss Trends
- Catastrophe Modeling



Accelerated Pace of Change

- Complexity and degree of competition are key factors driving the use of technology among different business lines
- Drivers of technological innovation:
 - Explosion of data coupled with more advanced analytics
 - Changing customer expectations
 - Focus on operational efficiency is leading to increased automation
- Innovative insurers are successfully leveraging technology for competitive advantage



Innovation



Highest Levels of Innovation



Reinsurance



Health



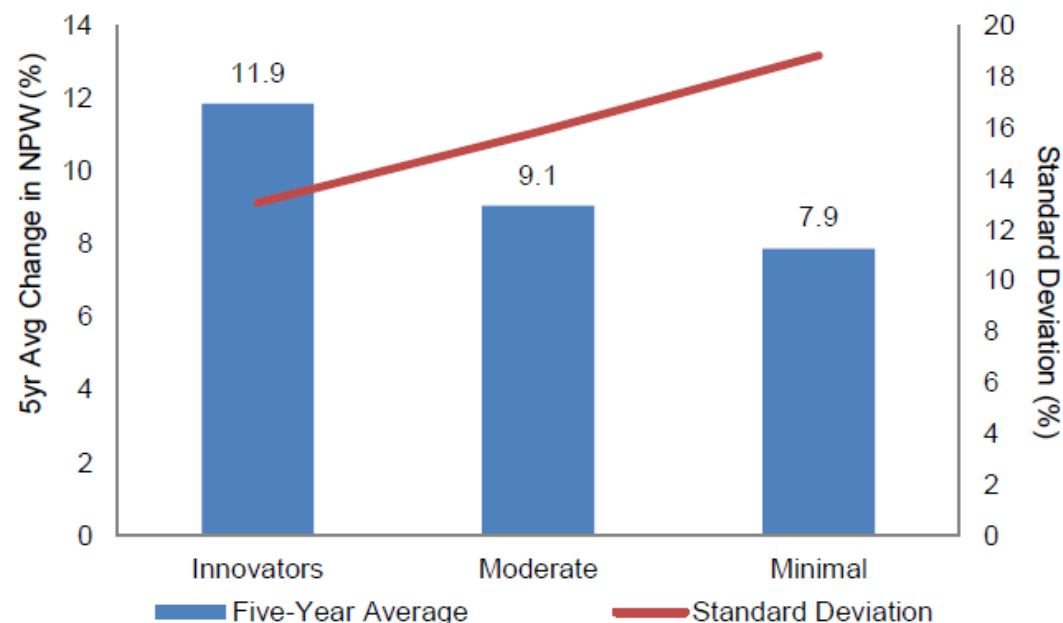
Auto



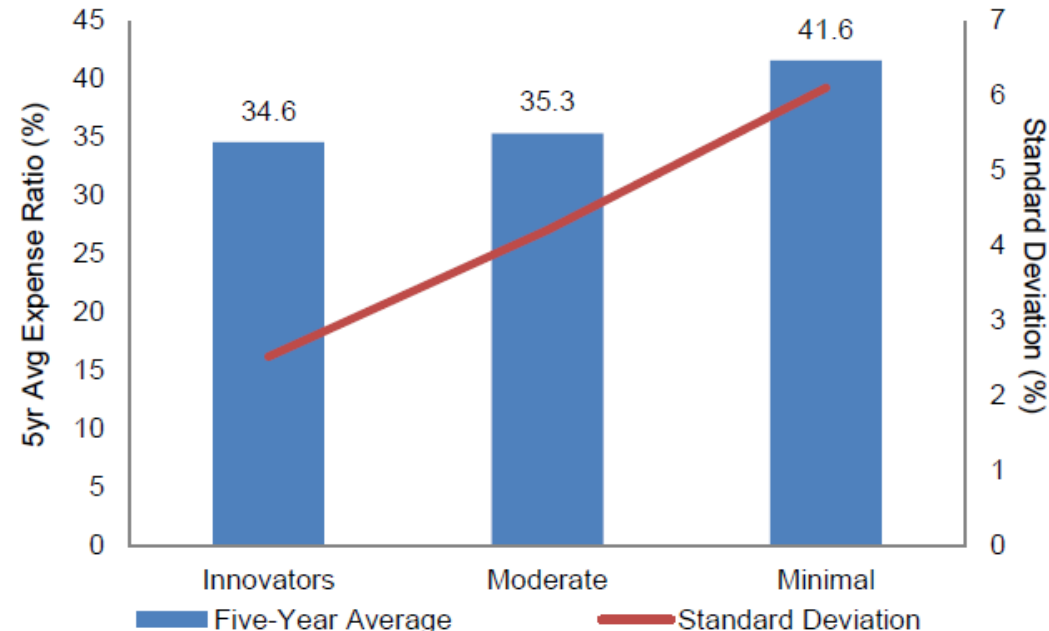
Creating a Competitive Advantage

- Innovative insurers are leveraging technology to enhance premium growth opportunities and better operational efficiency compared to peers

Global Non-Life – Five-Year Average Change in NPW by Innovation Category



Global Non-Life – Five-Year Average Expense Ratio by Innovation Category



Focus on Operational Efficiency

- Insurers are increasingly adopting more advanced forms of technology to automate processes to manage costs and increase customer satisfaction.



Claims



Underwriting



Fraud Detection



**Back Office
Operations**



**Customer
Interaction**



Compliance



Insurtech



InsurTech Challenges

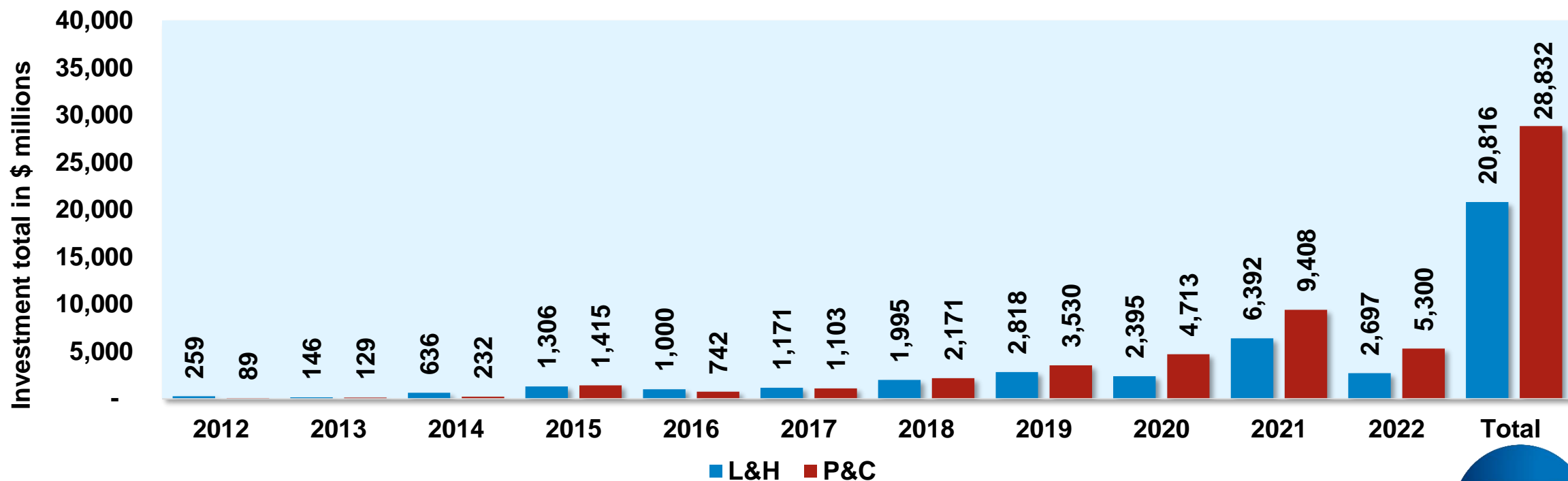
- Increasing macroeconomic headwinds resulted in first contraction in InsurTech funding since 2016.
 - Hardening (re)insurance market placing pressure on certain InsurTech business models
 - Venture capital becoming scarcer with increased focus on profitability
 - Significant layoffs and shutdowns
- Technology value proposition is still valid



Annual Funding Trends

- Overall InsurTech funding at approximately \$50 billion over the past ten years
- Approximately 60% of investments were in P&C sector with 40% invested in L&H

Total InsurTech Investment by Year Split by P&C and L&H

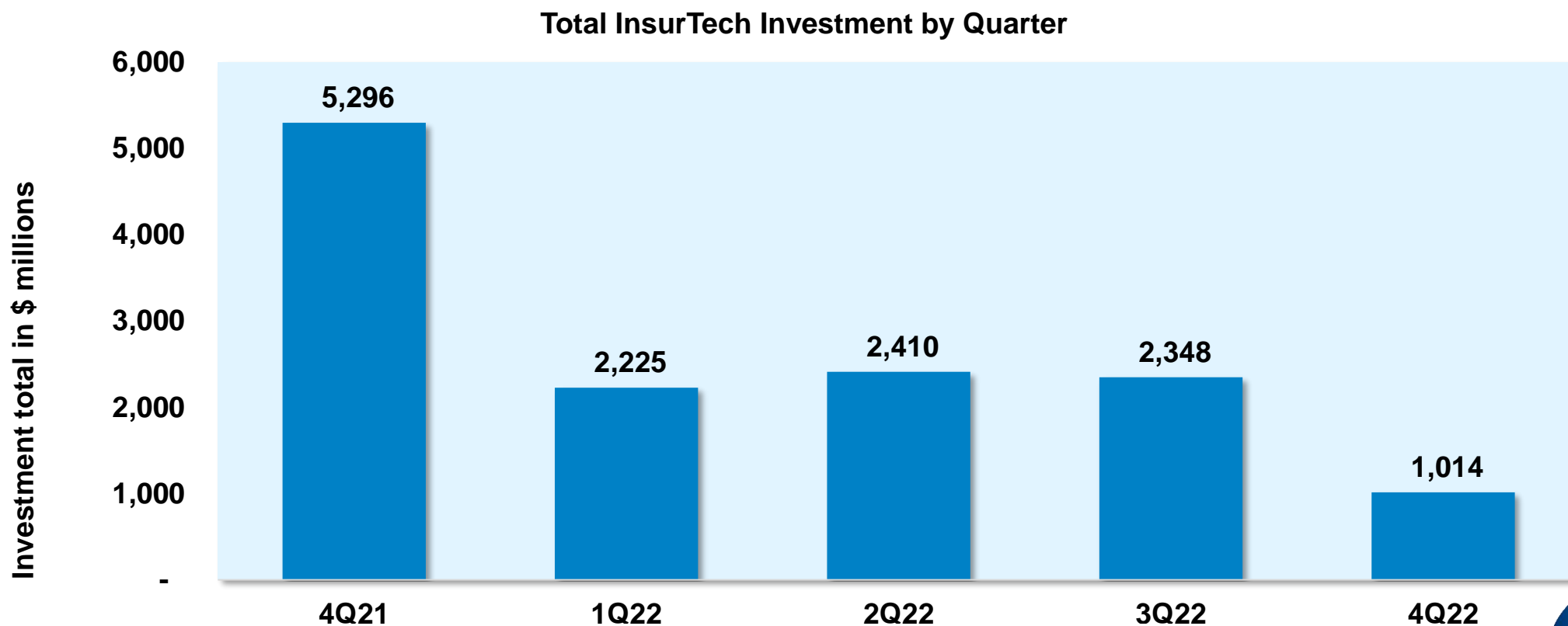


Source: Gallagher Re



Quarterly Funding Trends

- Fourth quarter funding down approximately 80% year over year
- Funding down 57% sequentially compared to third quarter



Source: Gallagher Re



Business Changes



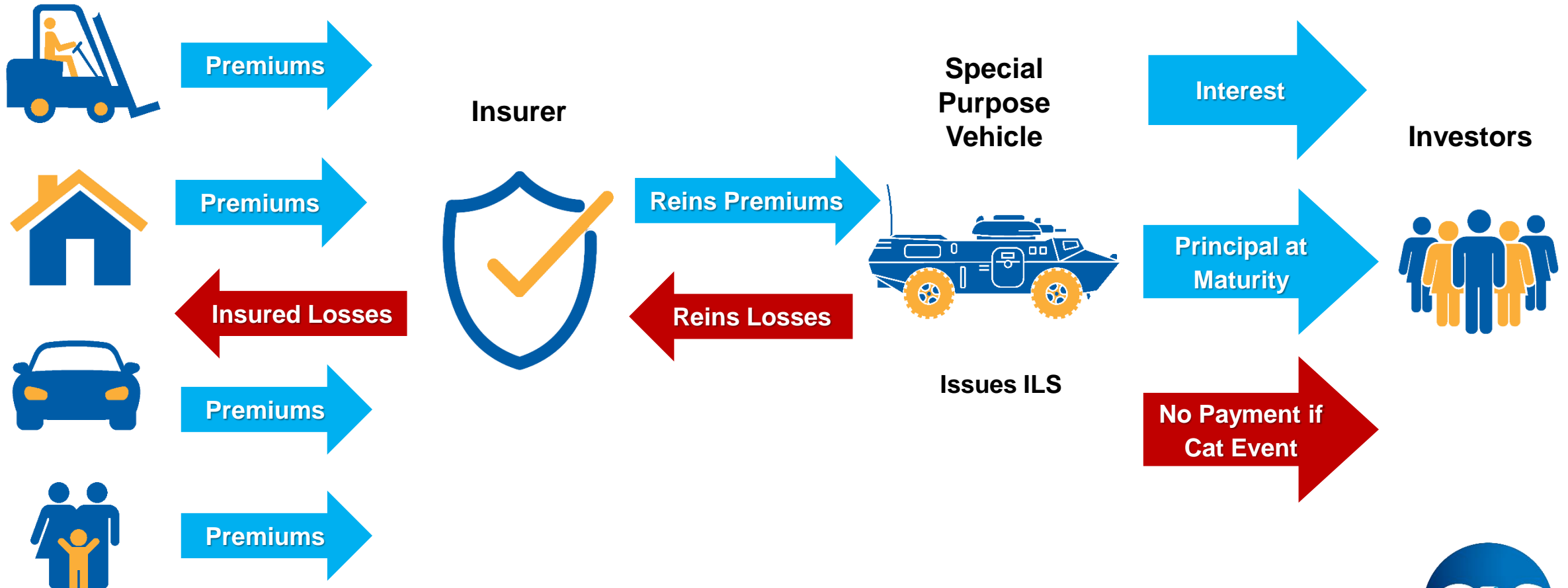
Technology and Partnerships Can Be Key Differentiating Factors in Cyber Insurance

- Highly specialized MGAs/DUAEs
- Technology-based
 - Surface scanning & cyber security recommendations
 - Real time, data driven beginning to end
 - Continuous risk management / intelligence monitoring
- Incidence response
 - Speed, response & resolution
 - Lower than average loss costs vs. industry
 - Pre and post claim services
- It's more than insurance ... it's a partnership



Insurance Linked Security Illustration

Policy Holders



Changing Customer Expectations

- Changing consumer preferences and higher expectations are accelerating the pace of technological advancement

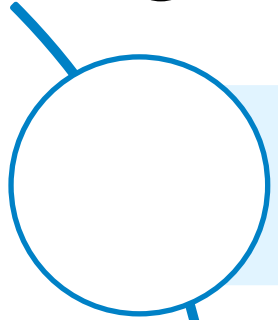


Embedded Insurance

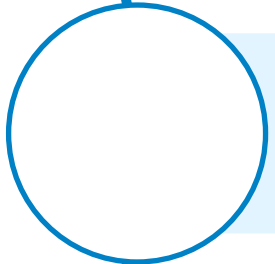


Digital Transformation

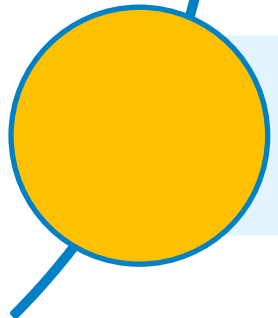
Agenda



What's changed?



Why does it matter?



What does this mean to you?

What does this all mean to you?

- Companies need to adapt
- These changes are an opportunity
- Your core responsibilities remain important

How will you consider these changes in meeting your responsibilities?



Thank you!



© AM Best Company, Inc. (AMB) and/or its licensors and affiliates. All rights reserved. ALL INFORMATION CONTAINED HEREIN IS PROTECTED BY COPYRIGHT LAW AND NONE OF SUCH INFORMATION MAY BE COPIED OR OTHERWISE REPRODUCED, REPACKAGED, FURTHER TRANSMITTED, TRANSFERRED, DISSEMINATED, REDISTRIBUTED OR RESOLD, OR STORED FOR SUBSEQUENT USE FOR ANY SUCH PURPOSE, IN WHOLE OR IN PART, IN ANY FORM OR MANNER OR BY ANY MEANS WHATSOEVER, BY ANY PERSON WITHOUT AMB's PRIOR WRITTEN CONSENT. All information contained herein is obtained by AMB from sources believed by it to be accurate and reliable. AMB does not audit or otherwise independently verify the accuracy or reliability of information received or otherwise used and therefore all information contained herein is provided "AS IS" without warranty of any kind. Under no circumstances shall AMB have any liability to any person or entity for (a) any loss or damage in whole or in part caused by, resulting from, or relating to, any error (negligent or otherwise) or other circumstance or contingency within or outside the control of AMB or any of its directors, officers, employees or agents in connection with the procurement, collection, compilation, analysis, interpretation, communication, publication or delivery of any such information, or (b) any direct, indirect, special, consequential, compensatory or incidental damages whatsoever (including without limitation, lost profits), even if AMB is advised in advance of the possibility of such damages, resulting from the use of or inability to use, any such information. The credit ratings, financial reporting analysis, projections, and other observations, if any, constituting part of the information contained herein are, and must be construed solely as, statements of opinion and not statements of fact or recommendations to purchase, sell or hold any securities, insurance policies, contracts or any other financial obligations, nor does it address the suitability of any particular financial obligation for a specific purpose or purchaser. Credit risk is the risk that an entity may not meet its contractual, financial obligations as they come due. Credit ratings do not address any other risk, including but not limited to, liquidity risk, market value risk or price volatility of rated securities. AMB is not an investment advisor and does not offer consulting or advisory services, nor does the company or its rating analysts offer any form of structuring or financial advice. NO WARRANTY, EXPRESS OR IMPLIED, AS TO THE ACCURACY, TIMELINESS, COMPLETENESS, MERCHANTABILITY OR FITNESS FOR ANY PARTICULAR PURPOSE OF ANY SUCH RATING OR OTHER OPINION OR INFORMATION IS GIVEN OR MADE BY AMB IN ANY FORM OR MANNER WHATSOEVER. Each credit rating or other opinion must be weighed solely as one factor in any investment or purchasing decision made by or on behalf of any user of the information contained herein, and each such user must accordingly make its own study and evaluation of each security or other financial obligation and of each issuer and guarantor of, and each provider of credit support for, each security or other financial obligation that it may consider purchasing, holding or selling.

