

# BILLION DOLLAR DISASTERS

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## WHAT IS A “CATASTROPHE”

- The dictionary definition:
  - a momentous tragic event ranging from extreme misfortune to utter overthrow or ruin
  - utter failure : **FIASCO**
  - a violent and sudden change in a feature of the earth
  - a violent usually destructive natural event (such as a supernova)
- Our definition:
  - The term “catastrophe” in the property insurance industry denotes a natural or man-made disaster that is unusually severe
  - \$25 million or more in claims, 10 deaths, 50 people injured, 2,000 filed claims (homes or structures damaged)

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## WHAT IS A “CATASTROPHE”

- The client’s definition:



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## SOME EXAMPLES of Natural and Man-Made Disasters

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- Tornadoes (39.9%)
- Hurricanes (38.2%)
- Other wind / hail / flood (7.1%)
- Winter storms (6.7%)
- Terrorism (5.9%)
- Wildfires (2.0%)
- Civil disorder, water damage, utility service disruption (0.2%)

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## THE WORLDWIDE TRENDS

\$380 billion  
in 2023

\$210 billion  
in 2020

\$71 billion  
in 2019

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### Top 10 Costliest Natural Catastrophes, United States (1)

(\$ millions)

| Rank | Year | Peril                 | Estimated insured property loss |                     |
|------|------|-----------------------|---------------------------------|---------------------|
|      |      |                       | Dollars when occurred           | In 2023 dollars (2) |
| 1    | 2005 | Hurricane Katrina     | \$65,000                        | \$101,865           |
| 2    | 2022 | Hurricane Ian         | 54,000                          | 55,772              |
| 3    | 2021 | Hurricane Ida         | 36,000                          | 40,503              |
| 4    | 2012 | Hurricane Sandy       | 30,000                          | 39,918              |
| 5    | 2017 | Hurricane Harvey      | 30,000                          | 37,609              |
| 6    | 2017 | Hurricane Irma        | 30,050                          | 37,473              |
| 7    | 2017 | Hurricane Maria       | 29,511                          | 36,802              |
| 8    | 1992 | Hurricane Andrew      | 16,000                          | 34,951              |
| 9    | 1994 | Northridge Earthquake | 15,300                          | 32,210              |
| 10   | 2008 | Hurricane Ike         | 18,200                          | 25,604              |

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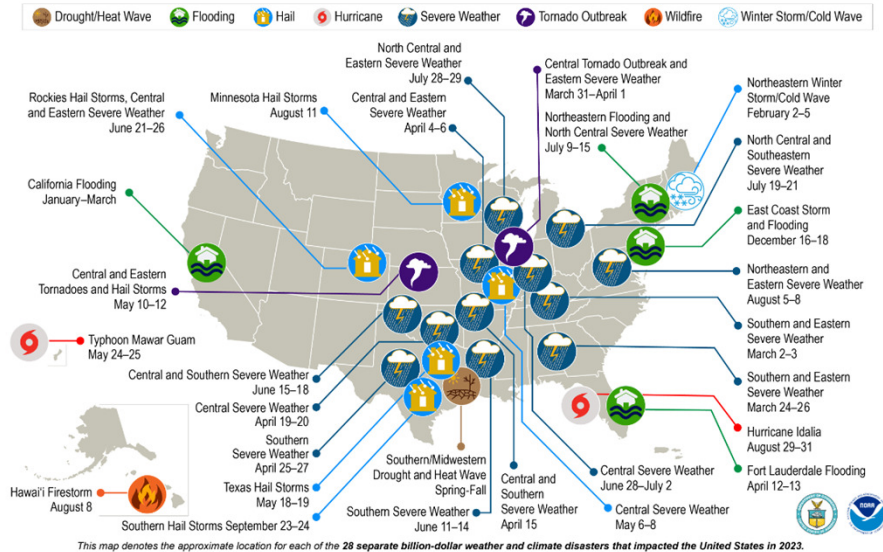
## Natural Catastrophe Losses In The United States By Peril, 2023 (1)

(\$ millions)

| Peril                       | Number of events | Fatalities | Economic losses (2) | Insured losses (3) |
|-----------------------------|------------------|------------|---------------------|--------------------|
| Severe convective storm     | 53               | 137        | \$72,649            | \$57,624           |
| Wildfire, drought, heatwave | 5                | 257        | 20,073              | 10,413             |
| Flooding                    | 16               | 18         | 11,812              | 5,919              |
| Winter storm                | 11               | 14         | 4,898               | 3,403              |
| Tropical cyclone            | 4                | 4          | 4,693               | 2,290              |
| <b>Total</b>                | <b>89</b>        | <b>430</b> | <b>\$114,125</b>    | <b>\$79,649</b>    |

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### U.S. 2023 Billion-Dollar Weather and Climate Disasters



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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         | \$213.6B          | 8.0%                  | \$21.4B        | 2,994         | 299         |
| 1990s (1990-1999)            | 57                       | 5.7         | \$326.8B          | 12.3%                 | \$32.7B        | 3,075         | 308         |
| 2000s (2000-2009)            | 67                       | 6.7         | \$604.2B          | 22.7%                 | \$60.4B        | 3,102         | 310         |
| 2010s (2010-2019)            | 131                      | 13.1        | \$967.5B          | 36.4%                 | \$96.8B        | 5,227         | 523         |
| Last 5 Years (2019-2023)     | 102                      | 20.4        | \$603.0B          | 22.7%                 | \$120.6B       | 1,996         | 399         |
| Last 3 Years (2021-2023)     | 66                       | 22.0        | \$431.4B          | 16.2%                 | \$143.8B       | 1,690         | 563         |
| Last Year (2023)             | 28                       | 28.0        | \$92.9B           | 3.5%                  | \$92.9B        | 492           | 492         |
| <b>All Years (1980-2023)</b> | <b>376</b>               | <b>8.5</b>  | <b>\$2,661.0B</b> | <b>100.0%</b>         | <b>\$60.5B</b> | <b>16,350</b> | <b>372</b>  |

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Tornadoes And Related Deaths By State, 2023 (1)

| State         | Tornadoes | Fatalities | Rank (2) | State                    | Tornadoes    | Fatalities | Rank (2) |
|---------------|-----------|------------|----------|--------------------------|--------------|------------|----------|
| Alabama       | 101       | 9          | 101      | Montana                  | 4            | 0          | 4        |
| Alaska        | 0         | 0          | (3)      | Nebraska                 | 81           | 0          | 81       |
| Arizona       | 4         | 0          | 4        | Nevada                   | 3            | 0          | 3        |
| Arkansas      | 36        | 4          | 36       | New Hampshire            | 2            | 0          | 2        |
| California    | 12        | 0          | 12       | New Jersey               | 13           | 0          | 13       |
| Colorado      | 89        | 0          | 89       | New Mexico               | 14           | 0          | 14       |
| Connecticut   | 2         | 0          | 2        | New York                 | 13           | 0          | 13       |
| Delaware      | 5         | 1          | 5        | North Carolina           | 14           | 0          | 14       |
| D.C.          | 0         | 0          | (2)      | North Dakota             | 5            | 0          | 5        |
| Florida       | 47        | 0          | 47       | Ohio                     | 56           | 0          | 56       |
| Georgia       | 58        | 1          | 58       | Oklahoma                 | 48           | 2          | 48       |
| Hawaii        | 0         | 0          | (3)      | Oregon                   | 2            | 0          | 2        |
| Idaho         | 5         | 0          | 5        | Pennsylvania             | 26           | 0          | 26       |
| Illinois      | 136       | 4          | 136      | Rhode Island             | 2            | 0          | 2        |
| Indiana       | 51        | 6          | 51       | South Carolina           | 18           | 0          | 18       |
| Iowa          | 73        | 0          | 73       | South Dakota             | 17           | 0          | 17       |
| Kansas        | 39        | 0          | 39       | Tennessee                | 53           | 17         | 53       |
| Kentucky      | 41        | 0          | 41       | Texas                    | 89           | 8          | 89       |
| Louisiana     | 38        | 0          | 38       | Utah                     | 3            | 0          | 3        |
| Maine         | 1         | 0          | 1        | Vermont                  | 2            | 0          | 2        |
| Maryland      | 2         | 0          | 2        | Virginia                 | 8            | 0          | 8        |
| Massachusetts | 8         | 0          | 8        | Washington               | 3            | 0          | 3        |
| Michigan      | 19        | 2          | 19       | West Virginia            | 0            | 0          | 0        |
| Minnesota     | 25        | 0          | 25       | Wisconsin                | 20           | 0          | 20       |
| Mississippi   | 81        | 24         | 81       | Wyoming                  | 27           | 0          | 27       |
| Missouri      | 27        | 5          | 27       | <b>United States (4)</b> | <b>1,423</b> | <b>83</b>  |          |

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## WHAT'S IMPACTING THE NUMBERS



Climate change



Coastal  
development



Population shifts



Changing  
property values



Building code  
changes



Other

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## UNDERINSURANCE – It's a Thing

- The causes
  - U.S. and global economics
  - CPI and inflation
  - Premium v. value
- Agent and broker responsibility – can you spell E and O?
- Establishing insurable values
- RC v. ACV v. Market Value


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| PPI MATERIALS INPUTS Forecast for JAN 2024 |             |       |       |       |        |                | YTD'24  |
|--|-------------|-------|-------|-------|--------|----------------|---------|
| % change in index avg / avg                |             | 2020  | 2021  | 2022  | 2023   | 2024           | asofJAN |
|  |             | avg % | avg % | avg % | avg %  | JAN%           | vsAvg23 |
| Inputs to Nonres Constr %                  | WPUIP231200 | 0.2   | 18.5  | 15.7% | -0.3%  | 0.64%          | 0.4%    |
| Inputs to Res Constr                       | WPUIP231100 | 2.4   | 18.3  | 12.6% | -2.6%  | 0.84%          | 0.8%    |
| Inputs to Highway                          | WPUIP231231 | 2.1   | 17.2  | 16.1% | 0.3%   | 0.93%          | 0.7%    |
| Ready Mix Concrete                         | WPU1333     | 2.5   | 3.8   | 10.3% | 11.0%  | 2.16%          | 3.2%    |
| Concrete Pipe                              | WPU1332     | 5.1   | 4.6   | 19.6% | 13.0%  | 2.17%          | 4.6%    |
| Concrete Block & Brick                     | WPU1331     | 3.0   | 4.2   | 12.0% | 11.0%  | 1.03%          | 4.0%    |
| Paving Mixtures                            | WPU1394     | -3.0  | 3.6   | 16.7% | 4.5%   | 8.56%          | 7.1%    |
| Lumber/Plywood                             | WPUSI004011 | 16.9  | 41.1  | -0.9% | -23.2% | 0.46%          | -3.3%   |
| Steel Mill Products                        | WPU1017     | -9.6  | 90.2  | 8.7%  | -16.2% | 5.35%          | 0.6%    |
| Fabricated Structural Steel                | WPU107405   | -2.3  | 26.7  | 27.8% | -0.4%  | 0.76%          | 3.1%    |
| Steel Pipe and Tube                        | WPU101706   | -5.2  | 44.9  | 26.9% | -17.2% | 2.23%          | -4.3%   |
| Sheet Metal                                | WPU1073     | -0.6  | 19.6  | 20.8% | 1.1%   | -0.15%         | 0.3%    |
| Asphalt Roofing/Siding                     | WPU1361     | 2.1   | 11.5  | 17.7% | 3.8%   | -0.41%         | 2.0%    |
| Rubber & Plastics                          | WPU0721     | 1.8   | 22.3  | 23.3% | -1.6%  | 0.34%          | -0.7%   |
| Gypsum Products                            | WPU137      | 0.4   | 16.2  | 18.7% | 3.6%   | 0.00%          | -1.2%   |
| Flat Glass                                 | WPU1311     | 1.5   | 5.3   | 10.4% | 5.8%   | -0.24%         | 0.2%    |
| Nonferrous Wire and Cable                  | WPU102603   | 0.2   | 27.0  | 13.0% | -0.4%  | 0.83%          | -1.0%   |
| Copper & Brass Mill Shapes                 | WPU102502   | 2.8   | 41.8  | 2.9%  | -1.6%  | 1.03%          | -0.6%   |
| Aluminum Mill Shapes                       | WPU102501   | -8.6  | 25.0  | 12.8% | -8.4%  | -1.69%         | -4.2%   |
| #2 Diesel Fuel                             | WPU057303   | -20.6 | 79.8  | 65.9% | -24.9% | -4.13%         | -16.7%  |
| data to JAN from FRED PPI reports 2-16-24  |             |       |       |       |        | edzarenski.com |         |

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## THE PROPERTY INSURANCE INDUSTRY

### Current Trends and Projections




REINSURANCE  
MARKET



PRICING  
"STABILIZATION"



CATASTROPHE  
MODELING



VALUATION AND  
"PREMIUM LEAKAGE"



LEADING INDICATORS  
OF A CHANGE


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## RISK MANAGEMENT IN ACTION

- Retention – getting it right
- Government participation
- Building code changes and enforcement
- Risk reduction – the new name of the game
- The agent and broker role

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## SPECIFIC PROPERTY INSURANCE ISSUES

|   |   |   |  |   |
|---|---|---|--|---|
|  |  |  |  |  |
| “Guaranteed” Replacement Cost   | Ordinance or Law  | Inflation Guard   | Statements of Value (SOV)  | Updated applications  |

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