Trend of Warehouse Fires and Loss Prevention

May 2023

Cargo Underwriting Section,
Marine and Aviation Underwriting Dept.
Mitsui Sumitomo Insurance Co., Ltd.

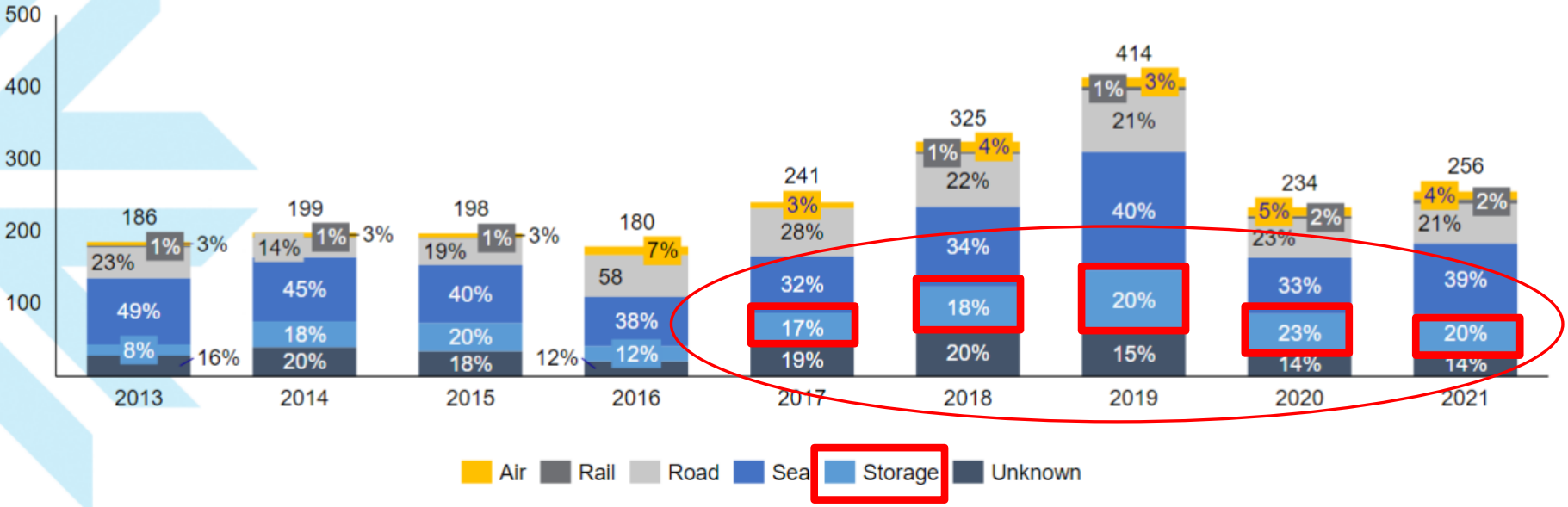
Trend of Storage Claim in the world

IUMI2022 CHICAGO SEPTEMBER 18-21

CARGO

Cargo: Number of losses by mode of transport without NatCat events or natural perils in the period 2013-2021

ex NatCat



Note: Due to manual mapping work about 61% of all observations can be used for analysis (compared to 57% otherwise)
Source: IUMI Major Claims Database

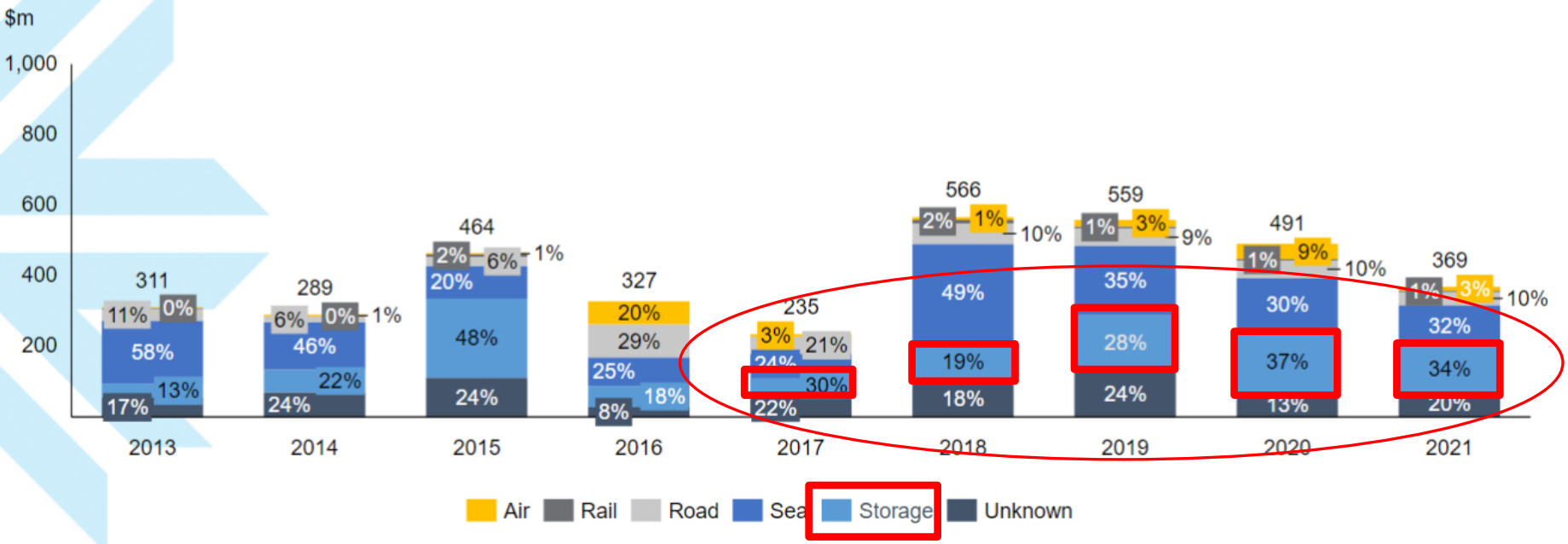
Trend of Storage Claim in the world

IUMI2022 CHICAGO SEPTEMBER 18-21

CARGO

Cargo: Incurred losses by mode of transport without NatCat events or natural perils in the period 2013-2021, $m

ex NatCat



Note: Due to manual mapping work about 61% of all observations can be used for analysis (compared to 57% otherwise)
Source: IUMI Major Claims Database

Trend of Warehouse Fires in the World

- Recent trend of larger than average warehouse fire losses
- These can be extremely damaging to insurers and reinsurers
- Claims are becoming more severe due to factors such as higher property and asset values, more complex supply chains and the growth in concentrations of exposures

Trend of Warehouse Fires in Japan

The Fire and Disaster Management Agency (FDMA) in Japan annually issues the report in respect of general statistics of fire in Japan. It covers the number of fires over all classes of business, cause of each fire and the number of casualties etc.

<Number of fires in 2020>

Type	No. of fires	%
Building Fire	19,365	55.8%
Forest Fire	1,239	3.6%
Vehicle Fire	3,466	10.0%
Vessel Fire	78	0.2%
Airplane Fire	0	0.0%
Others	10,543	30.4%
Total	34,691	100%

(Source: FDMA)

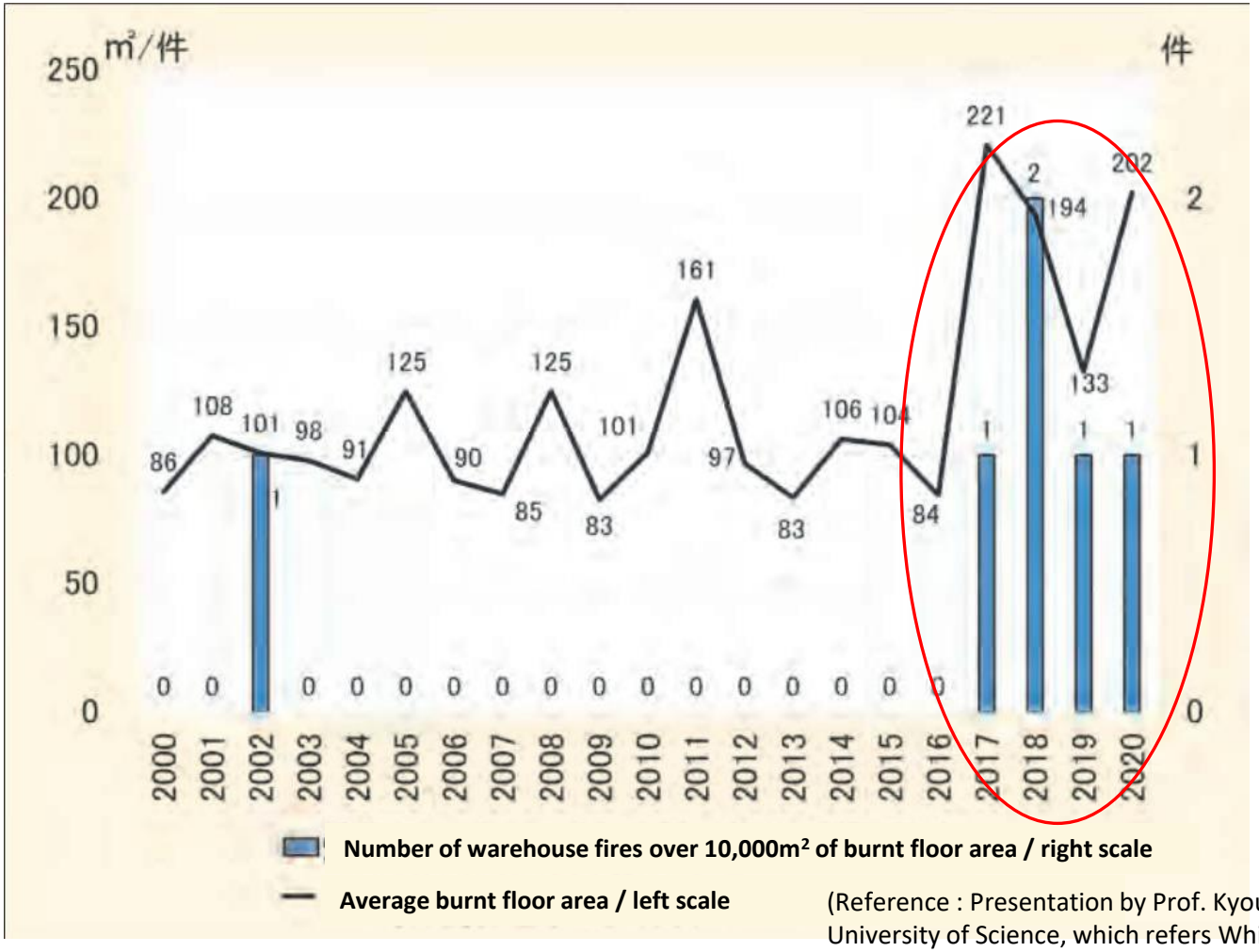
<Breakdown of building fire>

Type	No. of fires	%
Residential	10,561	54.6%
Complex	2,544	13.1%
Factory	1,599	8.3%
Office	718	3.7%
Warehouse	482	2.5%
Restaurant	443	2.3%
Retail	287	1.5%
Hotel	119	0.6%
School	111	0.6%
Hospital	78	0.4%
Others	2,423	12.4%
Total	19,365	100%

(Source: FDMA)

Trend of Warehouse Fires in Japan

The following chart is “Number and average of burnt floor area of warehouses over 10,000 m^2 of burnt floor area” which shows 1 or 2 large warehouse fires in these years.



(Reference : Presentation by Prof. Kyouichi Kobayashi, Tokyo University of Science, which refers White Paper on Fire Service.)

Minimum requirements under the Fire Services Act

<Summary of necessary equipment>

Name of equipment	Standards
Fire extinguisher	Total area 150 m^2 or more (basement/windowless floor/3rd floor and above must be 50 m^2 or more)
Indoor fire hydrant equipment	Total area 700 m^2 or more (basement/windowless floor/4th floor and above must be 150 m^2 or more)
Sprinkler equipment	Rack warehouse Ceiling height must exceed 10 m, total area 700 m^2 or more
	11th floor and above
Outdoor fire hydrant equipment	Total floor area of 1st and 2nd floors 3,000 m^2
Automatic fire alarm system	Total area 500 m^2 or more (basement/windowless floor/3rd floor and above must be 300 m^2 or more)
	11th floor and above
Notification equipment for notifying fire department (fire alarm device)	Total area 1,000 m^2 or more
Emergency guide sign (Emergency lighting guide)	All floors (basement/windowless floor/11th floor and above must be equipped with emergency lighting guide)
Firefighting water source	A site area 20,000 m^2 or more and total floor area of the 1st and 2nd floors is 5,000 m^2 or more (fire proof building15,000 m^2, semi-fireproof building 10,000 m^2)
	Buildings over 31 m high, total area 25,000 m^2 or more

Mission of Insurance / Reinsurance Industry

- **Risk inspection**
  - ✓ **Risk Expert**
  - ✓ **Comprehensive Risk Analysis**
- **Recommendation for Loss Prevention**
  - ✓ **Safety and Operation, Handbook**
  - ✓ **Loss Minimize - Fire Drill & First aid fire fighting**
- **Motivate to improve risk management**
  - ✓ **Appropriate Rate and Condition**
  - ✓ **Sustainability**