

Cambridge Judge Business School

Cambridge Centre for Risk Studies 2018 Risk Summit

MULTI-LINE INSURANCE CLASH MANAGEMENT

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Centre for Risk Studies

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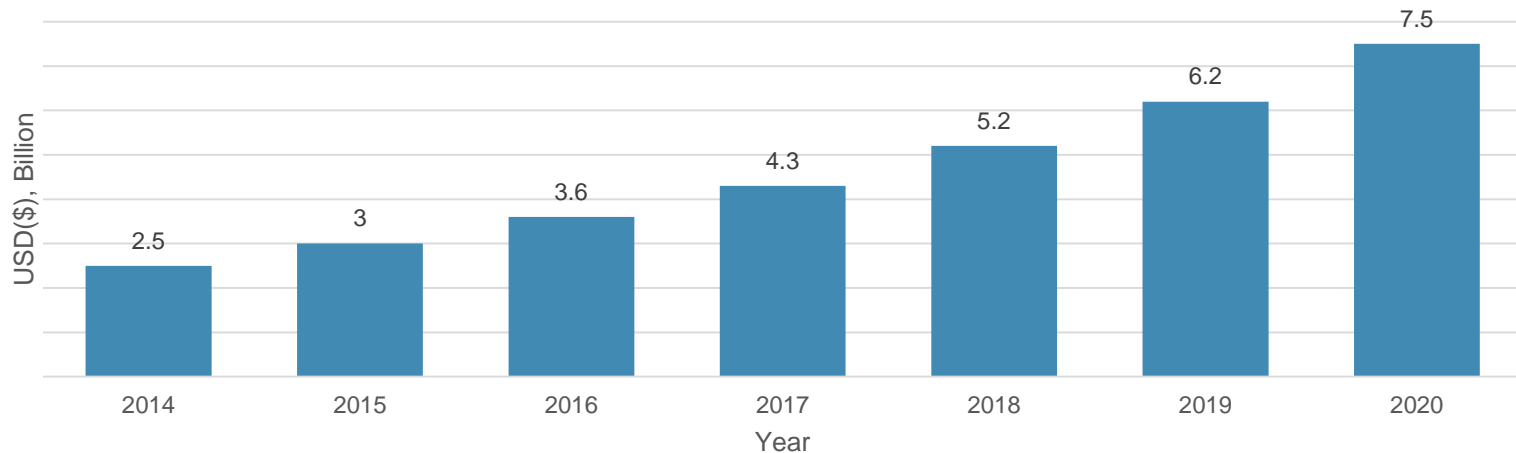


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General Trends

- Cyber Insurance is growing and becoming more complex
- InsurTechs are changing the role of technology in Insurance
- Consumer preferences are shifting
- Property Casualty market is becoming more expensive
- Emerging Markets are growing
- Insurance has a growing role in disaster resilience

Estimated Annual Cyber Insurance Premiums Written
(Global)

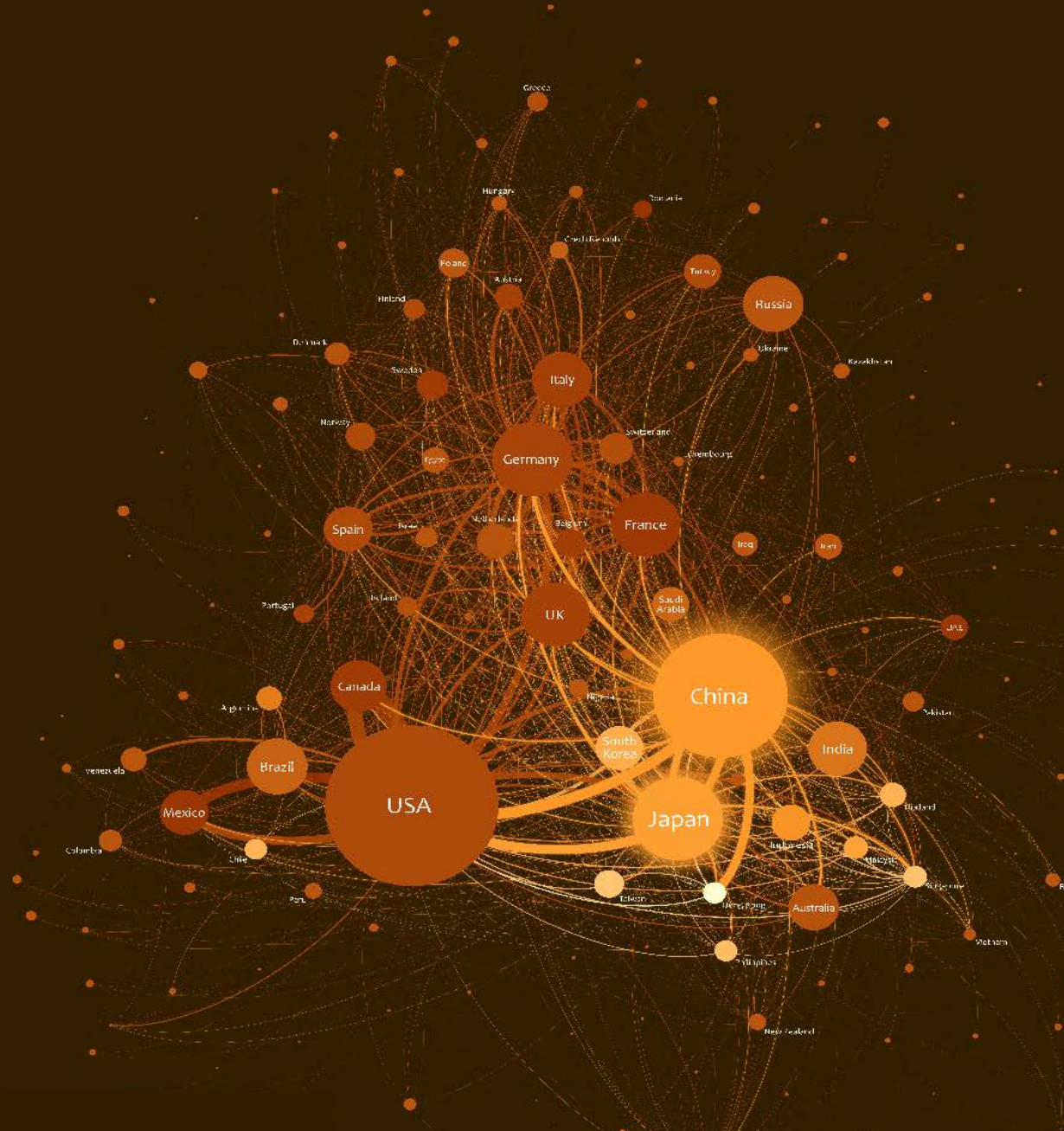


Information courtesy of PwC, Lloyds, BI Intelligence Estimates and Morgan, 2015.

Morgan, Steve. n.d. "Cyber Insurance Market Growing From \$2.5 Billion In 2015 To \$7.5 Billion By 2020." Forbes. Accessed June 7, 2018.
<https://www.forbes.com/sites/stevemorgan/2015/12/24/cyber-insurance-market-storm-forecast-2-5-billion-in-2015-projected-to-reach-7-5-billion-by-2020/>.

Concerns Within the Insurance Industry

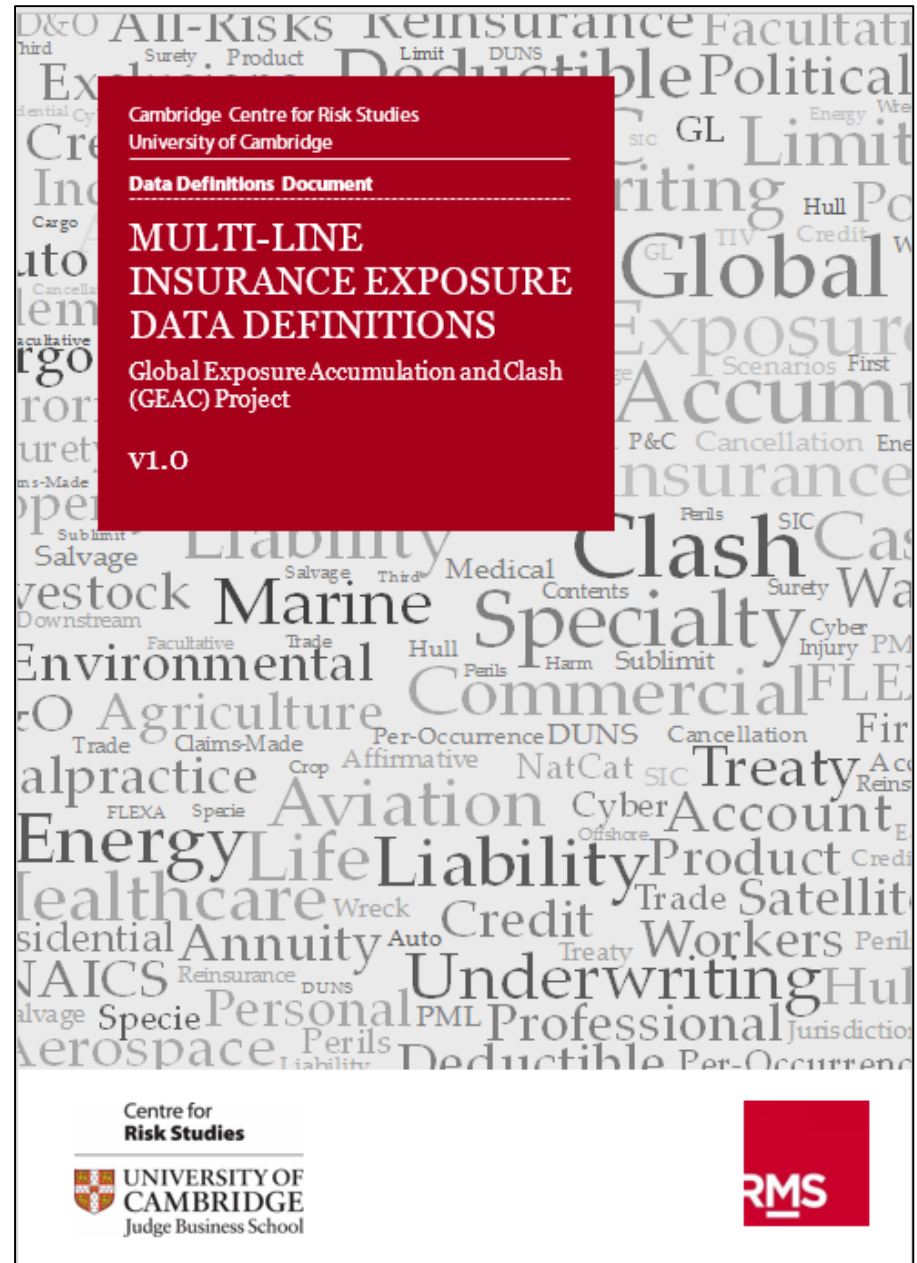
- Un-modelled risk and uncertainty
 - i.e. Liability
- Understanding more complex and interconnected risk
 - Inconsistent terminology
 - Clash risk
 - High value single location aggregation risk
 - Single policyholder aggregation risk
- Limited communication across sectors



The Need for Consistency: Global Exposure Accumulation and Clash Project

- Open standard
- Cover most classes of insurance
- Standardized framework
- Support data interchange
- Accumulation risk modelling
- Clash model analysis

Strong, Kayla, Andrew Coburn, Jennifer Copic, Kelly Quantrill, and Simon Ruffle. 2018. "Multi-Line Insurance Exposure Data Definitions: Global Exposure Accumulation and Clash Project V1.0." Data Definitions Document. Global Exposure Accumulation and Clash Project. Cambridge, England: Cambridge University: Centre for Risk Studies.



What Exists Already?

Data Exchange Standards



ACORD Standards



Lloyd's Target Operating Model



The British Standards Institution (BSI)



International Organization for Standardization (ISO)



United Nations Economic Commission for Europe: XML Naming and Design Rules

Agriculture Risk Modeling



AgRisk



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Property/NatCat Modeling



Risk Management Solutions (RMS)



AIR Worldwide



OASIS Loss Modelling Framework

Liability Risk Modeling



CASUALTY ANALYTICS PLATFORM

Arium Risk Architecture



Praedicat

Policy Administration Systems



Russell Group ALPS System



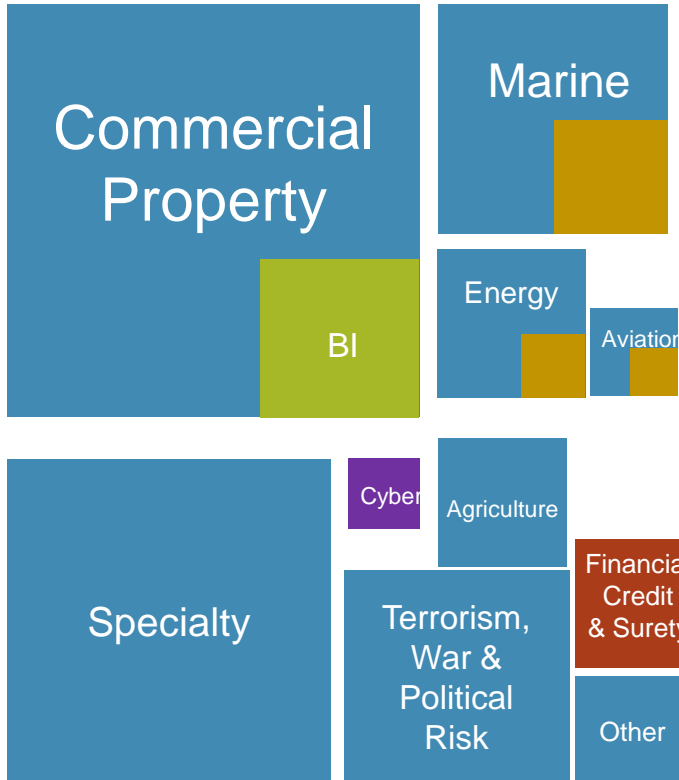
NIIT Technologies Advantage Suite



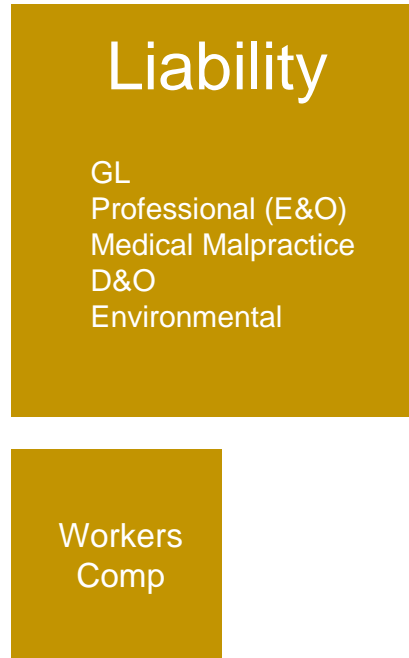
Xuber Xposure (Previously OpenXposure)

Lines of Insurance: Exposure

Property



Casualty Liability



Personal Accident



\$10,000 Trillion

To Scale

- Physical Damage
- Duty of care 3rd party
- Injury, illness or death
- Financial Asset Devaluation
- Revenue Loss. Business Interruption
- Digital asset loss (cyber)

No specific limit for compulsory auto 3rd party liability; average upper limits assumed

Estimated total insured exposure values, aggregate limits.
Pension asset value under management

Distribution of **\$105 Quadrillion**
(\$105,000 Trillion)
Insured Exposure Worldwide

Aggregate limits, Asset value under management

V1.0 Schema

Phase 0

(Existing Schemas)

- Commercial Property
- Residential Property
- Workers Compensation
- Cyber

Phase 1

- Marine
- Energy
- Aviation
- Casualty Liability

Phase 2

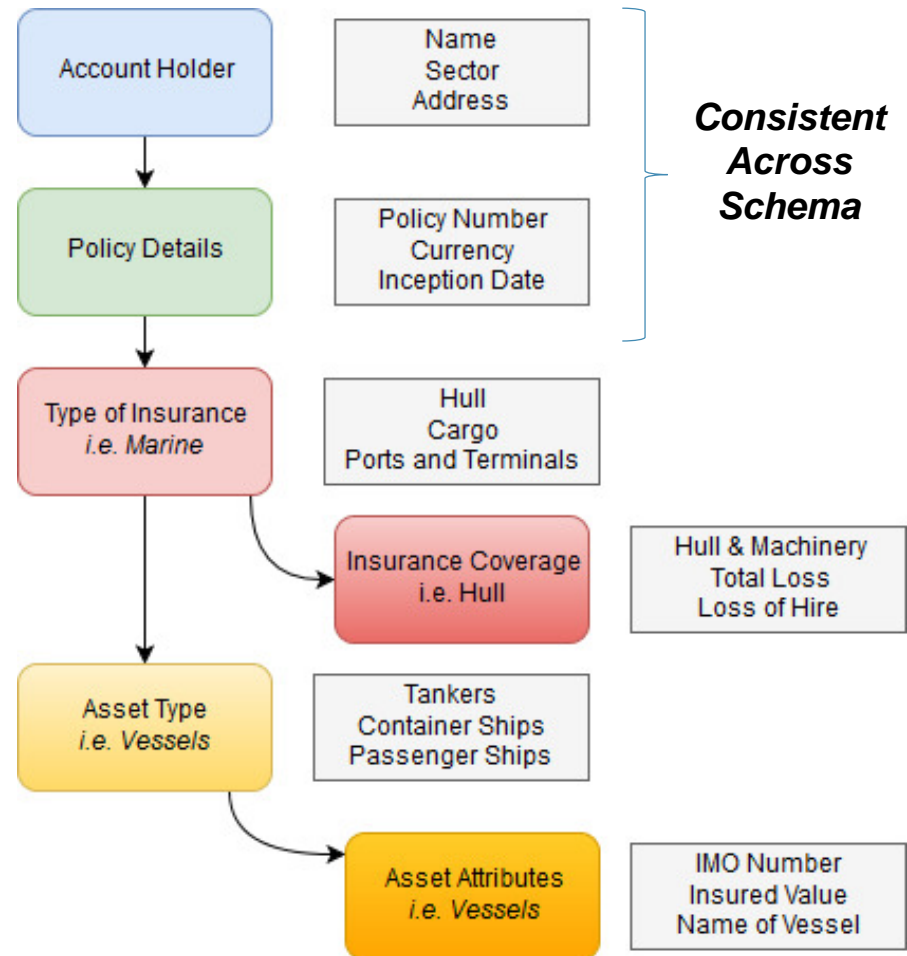
- Trade Credit
- Surety
- Agriculture
- Life
- Health
- Specialized Classes of Insurance

Phase 3

- Political Risk and Security
- Pensions and Annuities
- Commercial Lines
 - Commercial Auto
 - Business Travel insurance
 - Group Accident
- Personal Lines
 - Personal Auto
 - Personal Travel insurance
 - Personal Accident

Schema Development Process

- Divide into manageable blocks of information
- Series of dictionaries
- Identification of similarities and patterns across different classes of insurance.
- Incorporate common practice for as much of the market as possible
 - Identify translations and equivalences in terminology and concepts.
- Exercise in anthropology



Consultation Process



The Consultation Numbers:

715

Articles, Reports and Journals

130

Industry Stakeholders

27

Insurance Organizations

11

Modellers and Analysts

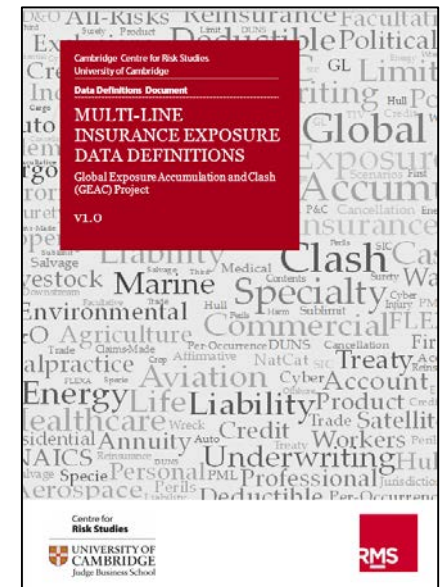


Global Exposure Accumulation and Clash V1.0: A Uniform Platform for Understanding Exposure

Challenges and Solutions for Enterprise Exposure Risk Management *Insurance Applications Beyond Property Classes*

- September 6, Judge Business School, Cambridge
- Data Definitions V1.0 launch event
- Please contact K.strong@jbs.cam.ac.uk to request invitation

| Provisional Order of Events |
|--|
| Welcome |
| Managing All Lines of Insurance Exposure |
| Industry Perspective 1: Market Facilitation / Regulator |
| Industry Perspective 2: Enterprise Exposure Management Primary |
| Industry Perspective 3: Enterprise Exposure Management Reinsurer |
| Tea Break |
| Multi-line Insurance Exposure Data Definition Document v1.0 |
| Clash Scenarios - Three examples |
| Where Next? |
| Panel Discussion: Managing Enterprise Exposure |
| Closing Remarks |
| Networking reception |



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