

AIR Currents Special Edition

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The Challenges Facing Cyber Insurance Today

The risk of cyber attacks is rising, yet the penetration of cyber insurance is estimated at less than 30% in the United States, which accounts for nearly 90% of worldwide cyber insurance premiums. While take-up is much lower in other countries, that is likely to change in May 2018, when the European General Data Protection Regulation, or GDPR, takes effect. Without the tools to confidently quantify the risk, many insurers do not see a clear path to *profitable* growth. Here are some of the primary challenges facing the market today.



LACK OF STANDARDISATION

It is difficult for buyers to compare coverage or pricing, as there is as yet no widely accepted “standardised” cyber insurance policy form language (although the enhanced program from ISO® is aiming to change that).

That lack of standardisation presents difficulties for insurers as well. In the aftermath of an event, insureds might seek coverage under cyber liability policies, but another possibility is having to pay out cyber-related losses under non-cyber policies, known to many in the industry as “silent cyber.” That is, if an insured has a loss, they may try to “find” coverage under E&O, D&O, commercial crime, or commercial general liability (CGL) policies.

DATA SCARCITY

A major element affecting many insurers’ willingness and ability to write cyber risk is the relative scarcity of reliable data on incidents and losses, which is often proprietary and non-standardised. The historical record for cyber breaches is relatively short; many attacks go undetected and unattributed; and many companies are hesitant to publicise that they have been breached unless required to do so by law.

The cyber (re)insurance market is small, but it will grow significantly over the next decade. One of the structural changes that must occur is the entry of capital markets capacity to provide both reinsurance and retrocessional protection for companies assuming cyber insurance risk. The use of industry loss warranties (ILWs)—and index-triggered catastrophe bonds—will undoubtedly create opportunities for growth. To that end, Verisk Analytics has announced the PCS Global Cyber index. To find out more, contact Tom Johansmeyer at tjohansmeyer@verisk.com.

SPOTTY EXPOSURE DATA

Before a contract is signed, there is a delicate balance between collecting enough information on the potential insured’s risk profile and requesting too much information about cyber vulnerabilities that the insured is unwilling or unable to divulge. Many insurers ask only for the industry and revenue of a potential insured, while others may spend weeks interviewing IT staff and require comprehensive questionnaires to be filled out before deciding whether to underwrite the risk.

Unlike property risk, there is still no standard set of exposure data collected at the point of underwriting.

WHAT DOES SUSTAINABLE CYBER RISK MANAGEMENT LOOK LIKE?

Effective management of cyber risk requires the ability to bridge the disconnect that currently exists between exposure and loss potential. AIR’s recently released Analytics of Risk from Cyber (ARC) enables insurers to manage portfolios; monitor accumulations and set underwriting guidelines; and conduct scenario analyses across many lines of business.

Contents

THE CHALLENGES FACING CYBER INSURANCE TODAY	1
INVESTING IN P&C ANALYTICS: A TALE OF TWO BUDGETS	2
PAVING THE WAY FOR INTERNATIONAL PROPERTY UNDERWRITING	3
PIONEERING INLAND FLOOD MODELLING IN JAPAN	4

Monte Carlo

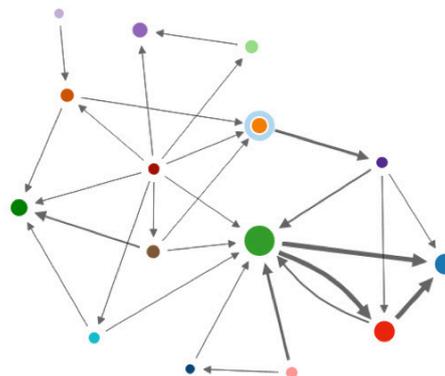
Investing in P&C Analytics: A Tale of Two Budgets

Here's a math problem for you. Add up everything your organisation spends on modelling property catastrophe risk—salary and benefits for staff, hardware and software infrastructure, and fees paid to modelling companies. Now, do the same thing for liability catastrophe risk. Consider the ratio of what you spend on property analytics to what you spend on liability analytics. If you are like most (re)insurers, that ratio may be 10 to 1. It may be 100 to 1.

Now take a look at what business you actually write. If you are like most (re)insurers, your liability premiums are probably roughly equivalent to—or perhaps even more than—your property insurance premiums. Why the imbalance?

According to A.M. Best, net ultimate asbestos losses stand today at about USD 100 billion. By comparison, the costliest natural catastrophe of all time is Hurricane Katrina, which would cost the industry USD 49 billion in today's dollars. And it gets worse. Katrina claims have essentially all been settled; for asbestos, however, the P&C industry continues to pay out about USD 2.5 billion annually. The reason is that many asbestos-related illnesses such as mesothelioma have a latency period of 40 years or more. Because of the time it takes for injuries to manifest, courts have applied a "discovery rule" that negates the statute of limitations. In most states injured parties have 12 to 24 months from the time of diagnosis to file a claim, regardless of when the original exposure to asbestos occurred. Because many asbestos manufacturers were driven into bankruptcy years ago, enterprising trial lawyers are now suing contractors and other companies in the asbestos-related supply chain.

Imagine now what will happen when the next liability cat occurs. Maybe it's similar to the Grenfell Tower fire but more widespread. And just like when a hurricane hits, you'll be fielding (or asking) tough questions. "Just



how much could we lose? Does this represent a threat to solvency? For how long will these claims continue to roll in? What could we have done to avoid this?"

Some have the perception that liability risk cannot be modelled, but thanks to modern analytical techniques and the rapid growth of available data, liability risk can finally be quantified. AIR's Arium platform offers powerful exposure management capabilities designed to help you evaluate liability accumulations and run casualty scenarios. With Arium, you can analyse and quantify your exposure to historical liability events and become more informed on what types of future events could cause significant losses to your portfolio. Arium is a cloud-based SaaS solution that does not require additional spending on IT infrastructure. More importantly, the same modelling resources dedicated to property cat modelling have all the skills required to start using this platform to begin making informed decisions based on Arium's analytics. In fact, it is likely advantageous to have the same teams working on both sides of the business. The need to better understand potential liability catastrophes is clear. Ultimately, the question is not "Can you afford a liability analytics solution?" but "Can you afford not to have one?"



In Focus

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Paving the Way for International Property Underwriting

The commercial and residential property underwriting process has traditionally lagged behind other insurance lines, such as auto, when it comes to digitisation and automation of workflow. Lack of data or unreliable data can lead to an inefficient process riddled with underwriting and pricing errors, thereby creating a major obstacle in the automation of underwriting processes. This invariably has a negative impact on both insurers' profitability and customer satisfaction.

Verisk's Underwriters Advantage for commercial and residential properties can bridge this gap and pave the way for a more efficient and customer-centric underwriting process. Insurers can consume this information via API, Excel file, or pdf report. These reports are already available in the United States, the United Kingdom, Hong Kong, and Singapore, with more geographies being added.

Underwriters Advantage offers the information needed to effectively underwrite and price a commercial property risk, including:

- Building characteristics and construction class.
- Occupancy overview and details about businesses at the address.
- International public protection class, which helps quantify the effectiveness of fire protection at a location.
- Information related to the property location, such as: aerial imagery; natural hazards detail, such as flood zones in the UK; technical premium for relevant hazards in different geographies; and crime statistics in neighbourhoods.
- Estimated rebuild cost based on Verisk's proprietary state-of-the-art algorithm that calculates replacement cost ground up using a component-based approach, rather than traditional cost-per-square-metre approach. This results in a much more informed estimate of rebuild cost.

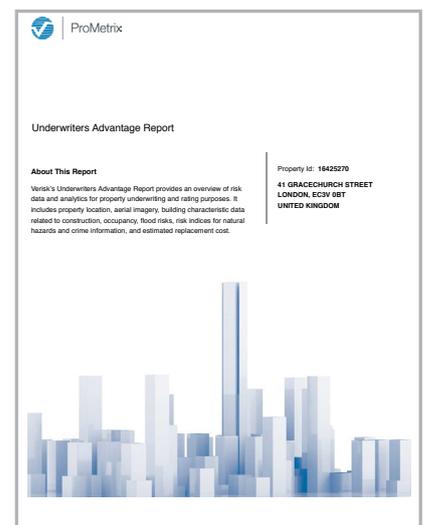
Underwriters Advantage offers many benefits that an insurer can tap into to gain competitive advantage:

- **Comprehensive solution.** Underwriters avoid the difficulties in extracting information from in-house policy documents, third-party surveyor reports, and diverse online sources; they also avoid the inconsistent and fragmented data that results from it. Accessing data at the touch of a button offers operational savings.
- **Timely insight.** Through the use of our web service and programmable APIs, Underwriters Advantage can provide underwriters with timely and accurate information to improve customer response times.
- **Reduced site visits.** Information required by underwriters can often involve a costly survey. Whilst site visits will still be required for some properties, Underwriters Advantage offers an immediate view, enabling underwriters to act upon information without delay or establish a more informed survey program.

- **Global platform.** Generating building information in key geographies globally, our solution will offer familiarity and comfort when seeking detailed property data on a global scale.

Speed to market with accurate pricing is vital, and specific information on properties is critical. Verisk has set the standard in the United States for accurate, reliable risk data and analytics for underwriting and rating purposes. Now we're responding to the global need with our single-source report currently used by hundreds of insurers who order millions of reports annually.

For more information, please go to: www.verisk.com/globalbur



Pioneering Inland Flood Modelling in Japan

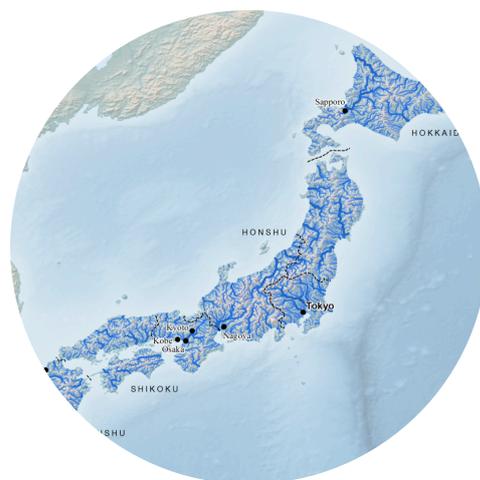
Approximately half of Japan's population and about 75% of insurable assets lie on floodplains. And while Japan typhoon models may capture flood risk from storm surge and typhoon-related precipitation, claims data indicate that 40% of flood losses can be attributed to precipitation not related to typhoons. As recently as 22–23 July of this year, for example, more than 340 mm of rain fell in just 24 hours in Akita Prefecture. Roughly 600 homes were flooded, dozens of roads were closed, and rail travel was severely affected. One of the worst floods in recent history happened in July 2012, when torrential rain fell on Kyushu, bringing more than 300 mm of precipitation to many locations and more than 500 mm to the town of Aso. Insured losses were estimated at USD 1.4 billion.

Damaging floods occur annually in Japan, yet until now effective tools for assessing and managing the risk have been absent.

A NEW APPROACH TO INLAND FLOOD MODELLING

To capture a truly robust view of flood risk in Japan, AIR has developed a unique simulations approach that seamlessly models both tropical and non tropical systems as they occur in nature. It is developed by taking output from a numerical weather prediction (NWP) model and applying machine learning to that output, which then forms the basis for a stochastic simulation. Modelling these two types of systems provides a complete picture of flood risk as these systems frequently interact with each other to create the "perfect storm" in terms of flooding.

AIR's new inland flood model for Japan consists of two components: on- and off-floodplain. The off-floodplain, or pluvial, component explicitly and physically accounts for risk factors such as storm drainage capacity in urban areas. The on-floodplain, or fluvial, component covers regions along Japan's major rivers to provide a more robust view of the risk under more complex conditions. The model also accounts for potential levee failure—including the possibility of failure on only one side of the river, which is often the failure mode when the river flow rate is at or below design capacity of the flood defence.



OWN YOUR JAPAN FLOOD RISK

The new AIR Inland Flood Model for Japan provides a comprehensive view of inland flood risk never before available. Users of Touchstone® who license both the AIR Inland Flood Model for Japan and the AIR Typhoon Model for Japan can seamlessly assess the risk of flooding from all sources: extratropical and other non tropical storms, typhoon-related precipitation, and storm surge.

