



RMS Cyber Solutions

Unparalleled Risk Analytics that Drive Improved Risk Selection, Pricing, Portfolio Diversification, Reinsurance Optimization, and Silent Cyber Risk Quantification



RMS CYBER
LOSS PROCESS
RISK MODELS

Information Technology

- Data Exfiltration
- Denial of Service
- Cloud Provider Failure
- Financial Transaction Theft
- Contagious Malware

Cyber Physical

- Power Blackout
- Property Fire
- Marine Cargo Port
- Industrial Facilities
- Upstream Energy

Cyber: An Extraordinary Growth Opportunity

Cyber insurance has been a strong performer in a challenging market cycle, providing consistent top-line growth at a time when little is available. However, there is systemic risk lurking beneath that growth – as evidenced by events such as WannaCry and Shadowbrokers. Therefore, appropriate risk management is critical to ensure long-term profitability.

RMS® is partnering with many leading insurers across underwriting and portfolio management, and throughout the insurance transfer chain, to quantify cyber risk and unlock this huge market opportunity.

Benefit From Unprecedented Multidimensional Risk Assessment

The RMS cyber model uses a multidimensional assessment to identify and quantify key risk variables that determine the frequency and severity of cyber-attacks. This includes a thorough assessment of threat-actor groups, human vulnerabilities, digital assets at risk, outside-in vulnerabilities, historical cyber incidents, loss process footprints, and the interplay with insurance contract terms. This proprietary research is embedded within an innovative risk modeling framework that can be used to model both individual and portfolio-level risks.

A key foundational component is the RMS Cyber Exposure Data Schema. This open-source data structure helps (re)insurers capture exposure data at a reasonable level of detail representing the cyber risk of an insured company. The schema provides a common syntax for organizing and measuring affirmative and silent cyber exposures, facilitating risk transfer across the industry.

RMS Cyber Solutions also provide scenarios to assist companies in assessing their exposure to cyber loss that goes beyond Information Technology. The RMS tool is unique in that it can analyze Cyber Physical exposures, enabling insurers to look for potential cyber-induced losses within their wider portfolio of risks. The RMS cyber model integrates with an RMS EDM dataset of property exposure to identify loss potential in insurance lines of commercial property, marine, energy, industrial facilities, and facultative, together with multiline potential.

The Building Blocks for Quantifying Cyber Risk

 Threat Landscape	 Attack Vectors/ Loss Mechanism	 Company Vulnerabilities	 Digital Assets	 Insurance Losses
Defines different threat-actor groups, motivations, resources, skill sets, and modus operandi	Categorizes cyber loss processes including their scalability and determines the size and footprint of the event	Defines susceptibility of a company to a specific cyber attack, considering human, as well as IT vulnerabilities	Quantifies the value of key revenue-dependent digital processes, data, and financial assets at risk	Calculates the insurance loss considering coverage limit and deductible information

RMS Cyber Solutions Use Cases

Underwriting

The RMS cyber model helps underwriters assess cyber risks, providing the confidence to accurately and competitively price policies. The tool accurately determines technical pricing based on several factors including company size, business sector, jurisdiction, and cyber security processes.

This model is built upon an analysis of over 62,000 cyber incidents and calibrated against insurance loss experience. Underwriters also benefit from partnerships with BitSight and SecurityScorecard, as well as detailed risk segmentation. The model enables insurers to move from a qualitative to a quantitative pricing approach, providing a fast and robust risk assessment. This removes the reliance on lengthy risk assessments, provides the ability to model different policy structures, and improves underwriters' ability to select appropriate risks.

Portfolio Management

Many insurers employ homegrown cyber risk models to determine portfolio probable maximum losses (PML), often adopting crude assumptions leading to overconservative allocation of risk capital or severe restrictions on coverage. With the RMS cyber risk model, insurers can use best-in-class risk modeling, built on top of a robust framework to determine appropriate levels of risk capital. This more accurate view frees up capital to write more business.

In addition, the RMS solution supports insurers to formulate strategies for growth. Through the creation of what-if portfolios carriers can stress different product designs and industry targeting approaches to define a diversified and resilient growth strategy.

Find Out More

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RMS is the world's leading catastrophe risk modeling company. From earthquakes, hurricanes, and flood to terrorism, agriculture, and infectious diseases, RMS helps financial institutions and public agencies understand, quantify, and manage risk.

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