SRA Stamford Risk Analytics

Reinventing Risk Management

Modern ERM -The New Risk Management Paradigm

Products and Services

OUR PERSPECTIVE

WHY DOES RISK MANAGEMENT NEED TO BE REINVENTED?

The global financial crisis revealed the need for a paradigm shift in risk management practices - one that has not yet taken place.

IN THE FINANCIAL SERVICES INDUSTRY

- Traditional economic capital models systematically underestimate risk because they do not adequately incorporate the impact of rare "black swan" events – evidenced by the fact that "one in a hundred year" events seem to occur every 10-15 years.
- Most risk models cannot combine hard data, soft data and expert opinion in an objective, transparent and theoretically valid manner.
- Biased models create "risk-reward arbitrage" opportunities, allowing unethical managers to deliberately engage in high-risk activities while appearing to operate within stakeholder risk tolerances.
- Because performance is generally benchmarked against peers, irresponsible behavior at one organization can lead to a "follow the herd mentality" and cause an industry trend (i.e., systemic risk).
- Many senior officers and corporate board members do not have a strong knowledge of risk management and often just assume that risk is being managed appropriately.

IN THE BROADER CORPORATE UNIVERSE

- Traditional Enterprise Risk Management (ERM) and Governance Risk and Compliance (GRC) frameworks view risk as the probability of a loss. Under this view, risk management is synonymous with loss prevention.
- Risk management actually means factoring risk into strategic and tactical business decisions, but this is not feasible under a traditional ERM or GRC approach.
- Traditional ERM and GRC approaches do not provide risk metrics that facilitate risk-reward or risk-control optimization.
- Many traditional ERM and GRC efforts fail to establish a viable risk taxonomy. As a result they do not distinguish between and among causes, events and effects. This not only creates confusion, it also obscures the root causes of the most significant losses.

ADOPTING A MODERN ERM FRAMEWORK WILL ALLOW ORGANIZATIONS TO ACCOMPLISH THE FOLLOWING

- Facilitate the holistic management of all risks across the enterprise, based on a consistent definition of risk and a comprehensive risk architecture/ taxonomy.
- Accurately incorporate the impact of rare "black swan" events into risk measures and metrics.
- Embed a risk culture that reflects and harmonizes the goals of key decision makers and external stakeholders.
- Create a structured and transparent process for factoring risk into the business decision-making process — at both a tactical and strategic level. Specifically, provide managers, senior managers and C-level executives the tools and information they need to optimize risk-reward, risk-control and risk-transfer in the context of cost-benefit analysis.
- Reduce information asymmetries between managers and stakeholders to help confirm that managers are pursuing strategies that conform to the risk tolerance standards of the stakeholders.

Our truly holistic approach addresses the weakness in existing frameworks and meets the core requirements of C-level staff across all industries.

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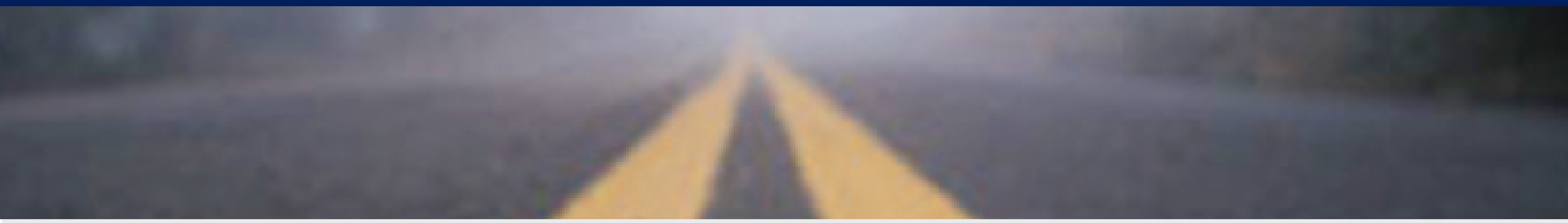
OUR PRODUCTS AND SERVICES



Stamford Risk Analytics offers a range of risk management products and services including Targeted Research Projects, Educational Seminars and Advisory and Consulting Services. We also offer three unique Software Products. All our software products leverage the newly developed Annualized Loss Exceedence Curve (ALEC) method (patent pending), which is causing a paradigm shift across the risk management industry. Stamford Risk Analytics' products transform risk management from a compliance exercise into a process that facilitates informed decision making and adds tangible value.

SOFTWARE PRODUCTS

Enterprise Risk Manager

The Enterprise Risk Manager™ is the most comprehensive and versatile risk management solution available today. It is the only software solution that allows analysts and executives to identify and assess their entire portfolio of risks and to use this information to make more effective tactical and strategic business decisions. This highly intuitive and user-friendly tool leverages the industry's most advanced risk analytics and yet requires virtually no prior knowledge of mathematics or statistics.

- Allows for the systematic assessment/measurement of all enterprise risks, including all business, market, credit, insurance, legal, strategic and operational risks, at any level of granularity; applicable across all industries, globally.
- Offers a myriad of practical benefits: allows for the estimation of key decision variables including risk premiums for pricing; facilitates the evaluation of risk-reward, risk-control and risk-transfer trade-offs – at the risk tolerance level of the stakeholders; enables informed decision-making across a range of risk management business problems.
- Allows one to use hard data, soft data and expert opinion – and any combination of the three–in an objective, transparent and theoretically valid manner.
- Leverages proprietary new technology, including the ALEC method, the industry's most advanced risk quantification technique, and an ultra high speed Monte-Carlo simulation engine, which produces virtually instantaneous results.
- Deceptively simple; the tool's intuitive and user-friendly interface belies its technical sophistication. Perfectly suited for executive decision-makers interested in evaluating the pros and cons of different business strategies in real time.
- Currently available in Chinese, English, French and German. Additional language options forthcoming.

Model Validator

The Model Validator™ allows an analyst to validate the core assumptions underlying a property-casualty loss model. Specifically, it enables users to empirically validate many complex actuarial modeling concepts in a theoretical environment using pseudo-random loss data. Examples: How sensitive are the results to changes in the data collection threshold? What is the impact of a severity cap? Is it practical to independently fit frequency and severity distributions when the data are heterogeneous and contain outliers? Are some frequency or severity distributions universally better or worse than others? How reliable are the standard goodness-of-fit tests and how useful is graphical analysis? How can one combine data from different sources (e.g., empirical loss data and expert opinion) in a practical and theoretically valid manner? How does severity fitting under the Truncated (MLE method compare to joint frequency and severity fitting under the ALEC fitting method?

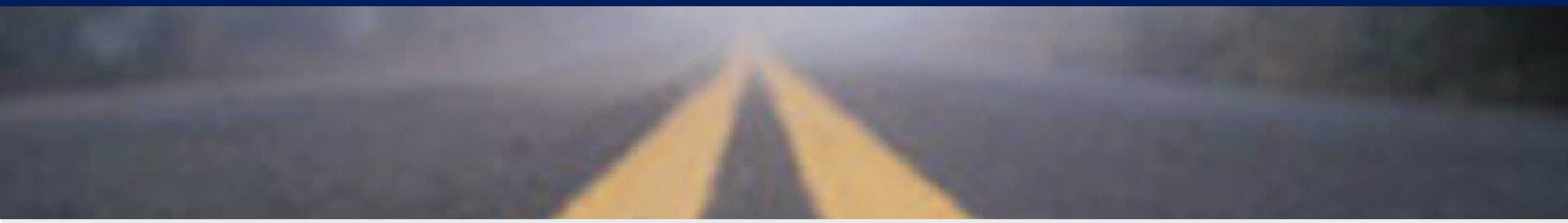
Risk Modeler

The Risk Modeler™ is the industry's most advanced tool for modeling risk under the P&C Loss Modeling Approach. It allows one to use both the traditional P&C Loss Modeling Approach, where frequency and severity are fit independently or sequentially and the ALEC method, where frequency and severity are fit simultaneously to produce the combined best-fit parameters. The tool also supports advanced graphical analysis. The Risk Modeler is unique in many ways. It is also the only such tool that allows one to combine expert opinion with empirical loss data (where the loss data are insufficient or obsolete) in an objective, transparent and theoretically valid manner and to accurately model data that are truncated, heterogeneous, subject to clustering and contain outliers.

The Risk Modeler also includes an ultra-high speed Monte Carlo simulation engine which allows users to calculate Value at Risk (VaR), Conditional Tail Expectation and Tail VaR under different correlation assumptions, with or without insurance.

Stamford Risk Analytics

OUR MISSION



A key goal of risk management is to create a transparent process for business decision making, whereby executives can confirm that they are pursuing strategies which are in conformity with the risk tolerance standards of the stakeholders.

Stamford Risk Analytics has a unique mission. Our goal is to help our clients–across all industries–understand the benefits of Modern ERM and to assist them in adopting this holistic approach to managing risk.

Modern ERM is a risk management framework. It is the only ERM framework based on a mature conception of risk, an intuitive and consistent risk taxonomy and an integrated measurement-management methodology. Modern ERM addresses the core risk management requirements of small, medium and large sized organizations.

Stamford Risk Analytics is headed by Ali Samad-Khan, a globally renowned expert in risk management. For his thought leadership work in this field, Mr. Samad-Khan has been recognized as “one of the 100 most influential people in finance” by Treasury & Risk Management Magazine.

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