

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.

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 industry's first enterprise/operational risk management solution. It is the only tool that allows practitioners to identify and assess their key enterprise/operational risks based on a conceptually sound definition of risk. The tool also includes a decision analysis module which allows executives to factor enterprise/operational risk information into business decisions – thereby enabling them to make more informed risk-based strategic decisions.

- Allows for all key risks and sub-risks (at any level of granularity) to be assessed based on a mature, theoretically valid conception of risk.
- Enables managers, senior managers and C-level officers to optimize risk-reward, risk-control and risk-transfer, in the context of cost-benefit analysis, at the risk tolerance level of the stakeholders.
- Allows for all relevant information, i.e., hard data, soft data and/or expert opinion – and any combination of the three, to be incorporated into the analysis.
- Produces virtually instantaneous risk results by employing an ultra-high speed Monte Carlo simulation engine. Ideal for “what-if” scenario analysis.
- Offers myriad practical risk management applications. Can be used to analyze the feasibility of new business proposals, as well as the viability of investments in risk mitigation (improved controls) and risk transfer (insurance) – based on the Cost of Risk method.
- Leverages complex algorithms and mathematical techniques, such as the ALEC method and advanced Monte-Carlo simulation. Nevertheless, this highly intuitive and user-friendly tool requires virtually no prior knowledge of mathematics or statistics. Perfectly suited for executive decision-makers.

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 “controlled environment.” Examples: How sensitive are model results to changes in the data collection threshold? What is the impact of a severity cap? Is it theoretically valid to independently fit frequency and severity distributions when the data are heterogeneous? Are some frequency/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., internal data, external data and expert opinion) in a practical and theoretically valid manner? How does severity fitting using maximum likelihood estimation (MLE) compare to frequency and severity fitting under the ALEC fitting method?

OpRisk Modeler

The OpRisk Modeler™ is the industry's most advanced tool for modeling operational risk. It allows a user to model operational risk under a loss distributions approach and/or a “scenario” approach. The tool offers a comprehensive set of features including truncated MLE fitting and advanced graphical analysis. The OpRisk Modeler is unique in many ways. It is the only operational risk modeling tool that offers functionality to simultaneously fit frequency and severity through the ALEC method. It is also perhaps the only such tool that allows a user to combine information from internal, external and scenario data in an objective, transparent and theoretically valid manner. The OpRisk Modeler also includes an ultra-high speed Monte Carlo simulation engine which allows users to calculate Value at Risk (VaR) and Conditional Tail Expectation or Tail VaR under different correlation assumptions, with or without insurance.

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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