

## CAS Enterprise Risk Management (ERM) Vision (4/2/07)

### **Introduction**

CAS members have always played a significant role in risk management, particularly in the measurement of risk for pricing, loss reserving and capital management. The CAS Board has identified Enterprise Risk Management (ERM) as a growing area of opportunity for CAS members and made the practice of ERM part of the Centennial Goal. The Board had adopted an earlier version of this ERM Vision at its May 2006 meeting. The Board will annually review the ERM Vision.

### **Centennial Goal** (second sentence only)

CAS members will advance their expertise in pricing, reserving and capital modeling, and leverage their skills in risk analysis to become recognized as experts in the evaluation of enterprise risks, particularly for the property and casualty insurance industry.

### **ERM in the Marketplace**

Risk management continues to evolve. Recent developments include alternative risk transfer mechanisms such as the securitization of catastrophe risk through the financial markets. New instruments have been developed to hedge financial risks. The transfer of risk has expanded beyond the insurance industry to the capital markets and others. Regulation has contributed to the evolution through a focus on improved corporate governance, convergence of financial services and international regulatory consistency. Rating agencies have announced plans to recognize ERM in their financial strength rating processes. These trends have increased the demand for professionals who can provide expanded risk management services.

ERM is part of that evolution, but it has come to represent some specific characteristics that were not part of risk management in the past. First, ERM treats risk in a holistic manner. Even if the entity treats a risk in a specific silo, ERM views that risk as part of the enterprisewide risk. Second, risk management has been elevated to a senior management responsibility. Some would add a third characteristic, the expansion of the risk management process to include opportunities as well as risks. And this report uses risk as having both upside and downside implications.

The CAS Committee on ERM adopted the following definition of ERM in its Overview of Enterprise Risk Management (2003):

ERM is the discipline by which an organization in any industry assesses, controls, exploits, finances, and monitors risks from all sources for the purpose of increasing the organization's short- and long-term value to its stakeholders.

Some might characterize it more today as a process, particularly since members of several professions have claimed expertise in the area.

While risk management is evolving beyond a cost center, ERM still remains a vision with substantive problems yet to be solved. But these problems create opportunity for those who can solve them. For example, a holistic view of risk suggests some way of aggregating the risk and that in turn implies integrating the risks and reflecting correlations between them. Another problem is integrating immeasurable risks.

Examples of risk integration in the P&C industry include asset and liability management, DFA and risk & capital management. The operations of P&C insurers include underwriting and investments. A DFA model is a tool to measure the major components of an insurer's operations – underwriting and investments. Mergers and acquisitions are excellent examples of the ERM process as they involve strategic, operational, financial, and hazard risks. Some actuaries are involved in these functions today.

### **CAS ERM Vision**

CAS members are experts in ratemaking and reserving - measuring hazard risk for the P&C industry or other entities. Some members have become experts in dealing with portfolios of risks – catastrophe risk, reinsurance, and capital management. A smaller number of members deal with investment risks. All of these can be viewed as (E)RM functions. That is, CAS members are already risk managers and experts in measuring risk. Actuarial functions should be recast in terms of (E)RM functions rather than the traditional more limited subset of insurance functions. To the extent that other risk management techniques are not covered, they should be incorporated (as appropriate) in CAS education. New developments in ERM including risk integration will be incorporated as they are developed.

While most CAS members may not know the latest quantification techniques being taught in universities today, they still have strong quantification skills that form a solid foundation on which to build through continuing education.

The natural ERM starting place for CAS members is the P&C insurance industry. And the natural strengths of CAS members involve quantifying risk including correlations, needed surplus and surplus allocation. The key competencies in the ERM process for insurers and reinsurers include:

1. Knowledge of (portfolio) underwriting risk including the uncertainty and volatility in losses, correlations and underwriting cycles (pricing/market risk);
2. Understanding of investment risk including asset risk, interest rate risk, and asset/liability management;
3. Knowledge of DFA (Dynamic Financial Analysis) modeling;
4. Understanding of other operational risks (employee benefit programs, distribution systems, IT, regulatory compliance, etc.), financial, and strategic risks;
5. Knowledge of a state-of-the-art “model” for aggregating/integrating these risks to produce a holistic view of the entity's risk, such as a dynamic risk model;
6. Knowledge of the overall framework for implementing an ERM program in an insurer or reinsurer.

7. Clear communication of actionable recommendations on improving corporate governance and increasing the enterprise's value to the Board, senior management, and staff, as appropriate.

The above would provide the CAS member with the expertise to be the “chief risk officer” of a P&C insurer. But other business skills (particularly communications) and considerations would also be important. The breadth of knowledge and responsibilities encapsulated above suggest that a team would be involved in the ERM process. Many CAS members may specialize in some of the key competencies mentioned above enabling them to fill other ERM positions. Also, other team members could handle traditional risk management functions, such as loss prevention.

CAS members employed by consulting firms, brokers, and other service providers could leverage the above P&C expertise to provide (components of) ERM services to non-insurance entities. Subject matter knowledge of an industry is a critical step in an effective ERM process. In ongoing service provider roles some might develop enough knowledge and engender enough management confidence to be hired as “CROs” of such entities. Otherwise, it would seem unlikely that a CAS member without the requisite expertise would be hired directly as a “CRO”. The most likely exception would be a financial services entity with a P&C operation.

The CAS ERM vision can be stated as follows:

1. CAS members provide Enterprise Risk Management services .
2. CAS members have the appropriate skills and techniques to be CROs or to fill other ERM roles.

The CAS ERM vision should be regularly revisited, reevaluated and revised as necessary.

### **CAS ERM Initiatives**

#### **Vice President – Risk Integration & ERM (VP-ERM)**

The Board established this new position for ten years to focus CAS ERM efforts. Much of the work within the CAS is being accomplished through internal liaisons within the existing committee structure. Liaisons have also been established to other actuarial and professional organizations. The liaisons to other professional organizations may be expanded to small committees that will develop mutually beneficial ERM relationships with them. For example, CAS members could be speakers at another professional organization's meetings, and vice versa.

#### **Risk Management Section (RMS)**

The CAS, the SOA and now the CIA have acted to cosponsor the RMS, which was formed to promote actuaries in (E)RM. All CAS, CIA and SOA members are eligible to join the RMS. The RMS is lead by a Council that is elected by the RMS members. The Council has acted to ensure the election of at least one CAS member to the Council. Both the CAS and SOA Boards have a liaison to the Council. The Council has also

appointed a second CAS member to complete the term of a resigning Council member. This appointment brings the proportion of CAS members on the Council more in line with the proportion of CAS members in the RMS.

CAS membership in the RMS has surged to over 730 (over 15% of CAS membership). The CAS needs to involve as many of the new CAS members as possible in RMS Teams, research committees and working parties.

The CAS, SOA, and PRMIA (Professional Risk Managers' International Association) sponsor the annual ERM Symposium. In its fifth year, the Symposium is probably the preeminent ERM meeting in North America. Speakers come from many professions and countries. The focus is on practical ERM applications.

The CAS has made the RMS a critical part of its ERM initiative and so must invest sufficient and appropriate resources to ensure its success. If the RMS is not able to accomplish a key CAS objective, then the CAS must seek an alternative solution(s).

### **Member Communications**

Working with CAS staff, the EC has developed a dynamic communications plan (RMS Marketing Work Plan). The Plan focuses on the importance of ERM and the RMS to CAS members. Many of the Plan initiatives have been completed, though some will probably be repeated. The Plan is an ongoing effort that will probably continue for at least several years to ensure membership awareness of ERM and its opportunities for CAS members.

The CAS is providing ERM sessions at meetings and seminars to increase member awareness and knowledge of ERM.

### **Continuing Education**

While ratemaking and reserving are risk management activities, the CAS must provide more robust training for its ERM-interested current members. Individual sessions at meetings can increase awareness of ERM, suggest a specific solution, and stimulate new thinking. But more structured training should be provided. Working with university professors and others to develop a variety of educational vehicles (limited attendance seminars, meeting tracks, etc.) should provide a sound basic education of the ERM process. Training on model building/use and new research findings must also be provided.

The RMS may be able to provide some of the training, but a CAS ERM (initial) focus on the P&C industry for CAS members may best be handled within the CAS.

## **Enterprise Risk Management Institute International (ERM-II)**

The CAS is a founding member of ERM-II and serves on the ERM-II Board and Executive Committee. A CAS member, who recently retired from a corporate CRO position, has become Executive Director. ERM-II is a consortium of universities and professional organizations that has been formed to promote ERM research and to provide robust ERM education through qualifying university graduate programs. The CAS provided financial and member resources for ERM-II's first research project, a study of ERM in the P&C industry. The project was completed in 2006.

The CAS, ERM-II and the RMS are exploring the possibility of a jointly sponsored ERM journal. Joint sponsorship could be extended to other organizations and professionals. ERM-II provides the opportunity for the CAS to partner with academics to develop practical solutions to ERM problems. Also, ERM-II graduate programs could be an excellent source of CAS candidates in the future. And the CAS could consider giving some Admissions credit for successful completion of a qualified program.

## **Research**

With the large number of professionals already practicing risk management, the opportunity for CAS members is to develop solutions to unresolved problems (quantification of immeasurable risks, risk integration including correlations, etc.). This research could be conducted by some mix of the RMS, ERM-II, and the CAS resources. Research could be the source of the enhanced CAS value proposition, the new solutions that CAS members bring to the ERM process.

## **External Communications (Marketing)**

The AAA and the CIA (assisted by the RMS, CAS and SOA as appropriate) must promote the value that actuaries bring to the ERM process. Initially the focus should be on the existing actuarial skill set and its relevance to risk management. Research findings by the RMS, ERM-II, CAS and SOA should enrich the actuarial value proposition and raise interest in actuaries as part of the ERM process. It is the role of the AAA and CIA to promote these research findings.

The Board has established the ERM for the CAS Committee to implement an ERM program for the CAS. The Committee will include representatives from all CAS functions including Staff and the Long Range Planning Committee. The predecessor task force developed an article for association trade press that promotes CAS expertise and experience with ERM.

Risk management is a long standing and evolving corporate function. ERM should expand its breadth and complexity. No one person will know everything. Consequently, it makes sense for the CAS to cooperate with other professionals for ERM to be a success and to raise the profile of CAS members in risk management. More team-oriented

efforts, such as the ERM Symposium, would enhance the position of CAS members in ERM.

### **Admissions**

In the short term, a small amount of material on ERM should be added to the Syllabus so that future members have a conceptual understanding of ERM. In addition, the DFA modeling course should evolve into an ERM course for a P&C insurer.

As the Syllabus is restructured, it should be changed from the narrow insurance perspective to a broader risk management perspective. Insurance is only one financial method for dealing with risk. This change should not involve a great deal of effort as it is more of a question of presentation than substance. Alternative risk transfer mechanisms such as securitization and captives should be included if they have not been already.