Outline for Future Solvency Framework/Long-term Statutory Solutions

Presented to the NAIC's Life and Health Actuarial Task Force by the American Academy of Actuaries' Life Practice Council's Life Financial Soundness/Risk Management Committee

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Introduction

The following outline provides a historical backdrop, as well as some possible future directions for the US solvency framework. These comments are consistent with the fundamental conclusions of the Unified Valuation System (UVS) project, as last reported in 1999 and 2000, and serve as a useful context for renewed discussions on the solvency framework in the United States.

This outline is intended to continue and initiate further discussions among the industry and regulators to seriously consider future developments to the solvency framework in the US. There are many interested parties within the global financial services industry working on the development of more relevant and comprehensive tools which accommodate the complexity of business strategies and resulting risk profiles. Some of these constituencies believe it is time to re-examine the overall solvency framework, including the nature and intent of the regulations and the role of regulators, actuaries, and company management in ensuring a company's overall solvency.

This outline contains the following sections:

I. Summary of Past UVS Recommendations and Issues

II. What Has Happened Since the 2000 UVS Report?

III. Recent Solvency Developments in the Financial Services Industry

IV. What Does This Mean for Regulators and Actuaries?

I. Summary of Past UVS Recommendations and Issues

Historically, the National Association of Insurance Commissioners' (NAIC) solvency framework has been defined in three separate arenas:

- Reserve adequacy via valuation reserve standards
- Minimum Capital Requirements via Risk-Based Capital (RBC) formulas which define triggers for required regulatory dialogue and intervention
- Risk Assessment via the Examination Process and the Statutory Management Discussion & Analysis (MD&A)

Each has specific, independent objectives with some overlapping uses in the regulatory process.

In 1997, the NAIC -through the Life Health Actuarial Task Force (LHATF) - asked the American Academy of Actuaries' (Academy) Valuation Task Force to review the current statutory valuation framework. The purpose of this review was to compare the current valuation framework to a framework based on a "clean sheet of paper", without regard to past constraints and practices. Fundamentally, the NAIC asked for a vision for a solvency framework, based on a set of principles that could keep pace with (and encourage) sound innovation in the industry.

Historically, the comprehensive solvency framework, including valuation, reflected industry innovations by adding layers to the existing regulations. For example, significant enhancements to the overall solvency framework occurred in the 1980's and early 1990's, with developments of more sophisticated RBC requirements and the creation of the valuation actuary position. These changes to the solvency framework were partially a reaction to major insurance company failures. The valuation framework of the 1970's and early 1980's had allowed these companies to operate with financial statements that did not reflect many of the major risks embedded in their business strategies.

The 1997 request to review the statutory framework was not due to company failures, but stemmed from the significant commitment of regulatory and industry resources that were needed to sustain the current solvency framework in a rapidly evolving insurance and financial services marketplace. Continuing to rely on the existing framework would either lead to future regulatory "surprises" as new risks emerged in the market place or to the stagnation of the industry by discouraging product innovation. While the solvency framework was clearly in a stronger position in 1997 than in 1977 or 1987, there were still several concerns.

The following brief summary from the Academy Valuation Task Force's December 1997 Report to LHATF highlights some of the shortcomings of the then current capital and valuation law framework.

1. Many of today's product designs and product lines were not contemplated when current valuation requirements were developed.
2. Emerging company and industry experience are not reflected in the Commissioners' Reserve Valuation Method (CRVM) and the Commissioners' Annuities Reserve Valuation Method (CARVM) reserve requirements and, hence, neither in RBC.
3. The CRVM and CARVM requirements ignore certain risks and use crude simplifications and approximations for others.
4. CARVM, CRVM & Health (gross premium) reserves do not allow for understanding and comparing level of margins in reserves. Thus, the formula based RBC calculated off of these reserves also does not allow for understanding and comparing the levels of required capital across these lines of business.
5. Typically, each new layer of regulation is added without updating the old (Asset Valuation Reserves - AVR, RBC, Actuarial Guidelines 33-34)
6. Unclear objectives for reserves and levels of required surplus

The last UVS update at the end of 2000 listed the following outstanding issues for the Academy and for Regulators:

Academy Issues

- Business Risk Classifications & Segmenting of Risks into Quantifiable, Subjective & High Impact/Low Frequency
- Focusing Academy – Includes role of Society of Actuaries (SOA), Councils within the Academy, etc.

Regulatory Issues

- Confidentiality
- Central review vs. use of reviewing actuary
- Coordinate NAIC groups that care about Blue Book
  - LHATF
  - Life RBC Working Group
  - E Committee
  - Liquidity Working Group
- Is it better to be Precisely Wrong or Approximately Right?
  - Tradeoff of Relevant vs. Accurate
- How to compare Life, Health, P&C and Banking?
- Discussion With Academy on Role of Feedback Loop
- Who Owns Risk Oversight Responsibility? – Blend of Management, Regulator, Actuary

In addition, the following concerns were expressed by some during the UVS discussions:

- Subjectivity - Concerns have often been raised about the level of subjectivity and potential manipulation of financial results if the setting of reserves and capital is based on company experience rather than standardized assumptions. The setting of loss reserves and the experience of the P&C actuaries provides an instructive example. Loss reserves are (and have been for some time) established using a blend of actuarial principles and judgement, with additional reliance placed on disclosure, as required by Schedule P information in order to "discipline" the discretion involved in setting loss reserves. Use of this approach by life insurers will mean broadening the use of key actual-to-expected analytics. Disclosure may, in several areas, become one of the most significant ways to provide discipline to the application of judgment, just like it currently provides discipline for the loss reserving process (a process that the P&C actuary has dealt with for decades).
- Profession Not Ready – Progress has been made and individual practitioners are ready. However, any reform requires a partnership and clarity of changes to both the industry, actuarial, and regulatory worlds. UVS concepts were the foundation for changes made in Canada during 2001. These occurred through partnered discussions with the Office of the Superintendent of Financial Institutions (OSFI) and the industry.
- Relationship to taxes – While a concern early in the UVS discussions, a workable approach emerged to continue the current reserve structure for most products, put newly created products and features that do not fit within this structure on a UVS basis to focus the energy on the required capital definition. In addition, there are elements of the UVS approach that may actually improve the ability to discuss taxes on a more rational, economic basis.
- Too complex – While the modeling may be more complex, the approach also introduces simplifications, as the methods for determining reserves and capital are based on fundamental principles, rather than a set of complex regulations and interpretations. The reason a reserve calculation is considered complex is often due to the complexity of the product design interacting with prescribed regulations and the uncertain accountability expectations of actuaries, regulators, and management across 51 jurisdictions.

II. What Has Happened Since the 2000 UVS Report?

US Life Insurance

- The 1999 UVS framework provided the conceptual direction for the solutions being developed for the shortcomings of combining traditional CARVM reserves as defined in drafts of AG MMMM proposals with the economic approach to capital used for RBC under the C-3 Phase II project.
- AG XXX has allowed the use of X factors based on company experience for deficiency reserves.
- Individual states like Ohio and New York have been developing risk-based approaches to use in their examination process.

What is Needed or Expected Today?

- For several years, regulators in the financial services industries and chief financial officers of large conglomerates have been struggling with the creation of a solvency framework that allows comparisons across countries and industries. Chief executive officers are joining this group with a strong need for sound indicators of financial health and risk. While the task of creating a more cohesive and comprehensive regulatory framework is not an easy task to accomplish, many believe significant improvements can be made.
- In the current framework, there is no measurable target prescribed for the determination of reserve levels. The solvency framework is based on a risk based capital formula that only provides a trigger level for regulatory intervention. Consequently, there is no formal or measurable link between reserve and minimum capital standards. An economic standard for reserves is needed.
- The regulatory framework for reserves and solvency is based on minimum standards, where failure to meet minimum standards initiates regulatory intervention. In other words, the regulations are not intended to provide any insight into an insurance company's financial strength, but rather provide insight into an insurance company's pending failure. This regulatory emphasis on potential failure, rather than strength renders comparisons between statutory financial statements of US insurance companies and other financial services companies meaningless. Comparative meaningful indicators for financial institutions are needed.

III. Recent Solvency Developments in the Financial Services Industry

Banking Developments (Basel II Accord)

The banking community has proposed, via Basel II, its vision for enhancing its solvency and capital adequacy framework. Basel II is meant to apply to international banks but is also has a great influence in most countries. In addition, the articulation of the next phase of the banking vision has already influenced developing insurance regulation in England and Canada where all financial services are regulated by a common regulator and may also influence US insurers who are owned by banks. The proposal is centered around the following concepts:

- First Pillar: minimum capital requirements;
- Second Pillar: a supervisory review process;
- Third Pillar: measures to foster market discipline via disclosure.

The first pillar, dealing with minimum capital requirements, is a modification of the minimum capital requirements defined in the Basel I accord. However, the Basel II draft Accord proposes several changes in this field. A new risk, operational risk, is identified separately in calculating minimum capital requirements. Moreover, the methods for calculating minimum capital will depend as far as possible on the banks' individual risk characteristics (and on their ability to model them). Minimum capital requirements will be set to encourage companies to model material risks and to also allow companies to demonstrate the need to hold less required capital.

The second pillar of the new Basel Accord lays down the following prudential supervisory principles:

- banks must develop capital assessment procedures commensurate with their risk profile;
- banks must also have a strategy for maintaining adequate capital;
- supervisors must evaluate the quality of banks' internal capital assessment procedures and the strategies implemented to maintain adequate capital, and the bank's overall ability to comply with minimum regulatory standards;
- supervisors must have the flexibility to impose a capital requirement in excess of the Accord's minimum requirements (whether for a particular institution or for the entire domestic market);
- supervisors must endeavor to intervene at an early stage to prevent capital from falling below its regulatory level; and, if capital is not maintained or restored to a level higher than the regulatory requirement, the supervisors must require prompt adoption of remedial measures.

The second pillar is a necessary companion to the first pillar (minimum capital requirements) for a number of reasons. First, the vision of Basel II is that the use of bank's internal model necessitates detailed verification by the supervisory authorities of the assumptions and reasonability of the underlying models. Second, the Basel Committee is aware that capital requirements determined under the first pillar might not fully reflect an institution's risk profile. Lastly, an institution that holds substantial capital still needs to manage and monitor its risks properly.

The third pillar of the new Basel Accord is designed to strengthen market discipline by introducing disclosure requirements. The arrangements set in place by the Accord comprise not only disclosure requirements but also "strong recommendations." A requirement imposed by the Basel Committee is a sine qua non for the use of internal models. The Basel Committee employs the term "strong recommendation" to take account of the fact that some banking supervisory authorities may not issue rules in this area.

International Developments on Solvency

Significant activity on the international front includes:

- European Union - A variant of the Basel tiering approach has also been recommended in the recently completed Solvency II project of the European.Union. The following is from page 84 of the appendix:

  > Factor-based approaches do not provide a comprehensive framework recognizing all types of risks. Probabilistic models provide, theoretically, the best tool for capital requirement calculations. However, the practicality issues involved preclude basing capital requirements entirely on the use of probabilistic models. Accordingly, a system that places strong emphasis and reliance on scenario test approaches would probably provide the best balance between practicality and effectiveness.
  > A possible approach might consist of three tiers, which allows insurance undertakings to calculate their capital requirements using any one of the following approaches:
  > 1. A fully codified factor based approach;
  > 2. A scenario-based approach, applying a pre-defined scenario set, but leaving some room for company specific assessment in the calculation of the scenario results;
  > 3. An advanced model approach, applying probabilistic models.
  >
  > Such an approach could require an undertaking to select any of the three approaches, but once chosen, a further change would only be possible in the direction of more advanced approaches, with the objective of encouraging undertakings to move in the direction of more powerful techniques.

- Canada – While Canada moved to a solvency framework based on internal company models and experience in the early 1990's, they have expanded this framework (in 2001) beyond the traditional insurance lines to include the techniques needed to define solvency requirements for financial guarantees on variable based products. In addition, Canada is formalizing a risk assessment process that will apply to all financial service companies.

- The Solvency Committee of the International Association of Insurance Supervisors (IAIS) has requested the Insurance Regulation Committee of the International Actuarial Association (IAA) to propose items that might be considered as part of an international recommendation for insurance solvency requirements. A preliminary report was issued in early 2002, with a more in depth report scheduled for mid 2003.

To summarize, capital requirements have seen three levels of sophistication evolve over the years:

- At the simplest level, all companies can be required to maintain a minimum amount of capital.
- The next level of development has involved the use of company-specific minimum capital requirements through the use of fixed factors that are applied to various items of a company's reported balance sheet or financial statement. In Finland, an RBC system of capital requirements was introduced as early as the beginning of the 1950's with subsequent revisions in the 1960's, the early 1980's and in the 1990's. The present system might be described as a combination of "fixed factor" and internal model approach. An RBC system of capital requirements was also developed in the US and Canada in the early and mid 1990's (more modest, less complex versions were present in the 1980's) and in many other countries in recent years. The fixed factors in these requirements are generally determined based on a ruin theory approach and are set at a minimum level to determine when a company requires regulatory action. They initially reflect a conservative view of an industry-wide exposure to risk and then apply a factor to set the minimums and thus are not meant to reflect a company's true (economic) capital requirements.
- The third level in the development of capital requirements puts increased focus on the use of company specific internal models to reflect a company's unique risk profile and corresponding capital requirements. For example, starting this year, Australian P&C companies will have the option of using internal models for reserve setting. The regulator must first approve the model, with RBC factors applied to a rigorous reserve estimate of the underlying central claim point, increased to a level of 75 percent of sufficiency.

IV. What Does This Mean for Regulators and Actuaries

1. Clarify Goals (Vision) of Solvency System.

A. The mission statements of both insurance regulators and actuaries are committed to serving the individual consumer of insurance products. To complement our roles both constituencies need to dialogue to reach consensus on a philosophical framework. The framework needs to clarify the different weights of legal responsibility and expectations assigned to regulators, actuaries, and management to meet solvency and risk disclosure requirements. The dialogue and framework need to create an effective balance of the tension for accountability and standards/requirements between the regulator, management and the actuary.

B. The risk assessment process should focus more on trends over time (direction) versus the current focus on a point in time number. If so, development of Schedule P(H) type of information may need to be created for lapses, mortality, expenses, spreads, etc., and for sensitivity measures, like duration, concentration risk and possible variances in required capital.

C. All parties involved with assessing solvency need to reach consensus on the roles of the regulator and company management in terms of risk assessment. In other words, is company management or the regulator expected to be the source of knowledge about risk? A formula suggests the regulator is and has the responsibility to "find" the risks assumed by the company. However, if the company is the knowledge center, the regulator's job includes "underwriting" those companies who do not fully understand their risks. By comparing risk processes across companies the regulator will be able to ascertain which companies may be "missing" key risks. By making the company the center of knowledge the regulator encourages a "knowledge" based industry with a more vested interest in fundamentally linking capital and risk within a required capital framework.

2. Coordinate/Update Regulatory and Actuarial Projects

The following attempts to list the "interested parties" in just the regulatory and actuarial community who are concerned with or might be involved in improving the solvency framework. Independent of possible developments by the International Accounting Standards Board (IASB), the need to create an effective balance of the tension for accountability between the regulator, management and the actuary means that some form of consensus between these groups needs to be developed on these issues:

- NAIC arenas
    - LHATF
    - A Committee
    - Life RBC Working Group
    - RBC Task Force
    - Risk Assessment Working Group
    - E Committee
    - H Committee on IAIS issues
    - Other (Executive Committee?)
- Actuarial Groups
    - Academy Financial Reporting Council
    - Academy Life Practice Council
    - IAA Insurance Regulation Committee
    - SOA Risk Management Task Force
- International Groups
    - Solvency Committee of IAIS
    - European Group Consultatif

3. Next Steps to Develop the Vision

In moving to a broader Solvency/Risk framework, the following topics (in no particular order) will need to be considered, either individually, or in aggregate:

1) Interaction of Risks for Internal Hedging Uses
2) Risk Measurement Tools
3) Better Clarity on Underlying Risks to Identify Redundancies & Shortfalls
4) Relate Tools for Reserve Setting based on experience of reasonable outcomes to those for setting Capital for events in the tail which may never have happened before
5) Defining a C-3 Phase III for Equity Indexed Annuities and Variable Life
6) Defining Pricing Risk C-2 Refinements (Phase I)
7) Defining Measures of Operational Risk C-4 Refinements (Phase I)
8) Integrate capital requirements with regulatory review of qualitative assessments and the use of disclosure
9) Process for
    - Identification of Risks
    - Documenting steps taken to mitigate risks
    - Defining/Measuring risk that remains
10) In contrast to the current system where reserve minimums are defined by law and the valuation actuary can only include additional reserves, consider options that define reserves and/or capital in terms of a maximum at individual policy level with offsets measured by internal modeling results
11) Confidentiality Safeguards