



AMERICAN ACADEMY *of* ACTUARIES

MEMORANDUM

To: NAIC Life and Health Actuarial Task Force
From: Academy SVL 2 Work Group
Subject: Enterprise Risk Management – Strategic Direction
Date: 09/09/04

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Enterprise Risk Management – Strategic Direction
3-5 Year Strategic Plan

I. Overview of ERM Structure

A. Scope and Focus of ERM Direction

1. To move to a comprehensive ERM structure, all product types, including life, health, annuities, and reinsurance operations need to be addressed eventually.
2. An enterprise wide view of all potential risks needs to be explicitly identified and analyzed. This includes the traditional C1-C4 risks, as well as broader business risks such as the impact of higher and lower levels of new business.
3. A major aspect of ERM is how risks for each product type are correlated. This requires a broad view of overall risks, rather than an independent review of each risk.

B. Actuarial Assumptions for Future Experience and Margins

1. Actuarial assumptions of the future would be based on best estimates, with explicit margins determined by evaluating an appropriate confidence level from an underlying distribution for equity returns, interest rates, mortality, morbidity, and lapse rates. The application or choice of “appropriate” confidence level will be a function of the degree of reliability of the underlying distribution and the kinds of controls (e.g. min and max requirements, disclosure, sensitivity testing, peer review) tied to the measurement process.
2. Changes in best estimates after issue may require an increase in reserves or capital (immediate, near term or far term) or allow for lower reserves and less required capital. The manner in which such changes should be folded into the reporting process for reserves, RBC, disclosure, sensitivity testing and peer review also needs to be addressed
- 3.

C. Non-Guaranteed Elements (NGE’s) within the ERM structure are also a key underlying basis and motivation for SVL II.

1. A key component of the ERM structure is that future NGE’s are fully recognized
2. Various types of products will require different methods of managing and incorporating NGE’s into the ERM/reporting process:
 - a. Participating policies – dividend scales that reflect allocation of surplus as it occurs would be treated differently from dividend scales based on other criteria (such as might occur for closed blocks);
 - b. Health premiums – these are generally subject to regulatory-based limits which should be reflected in ERM;
 - c. Negotiated arrangements – certain group life, health and annuity plans may negotiate with policyholders to address how changes will be reflected specifically for the policy;
 - d. Individual Life and Annuity policies – changes to NGEs not developed by one of the above methods will apply consistently to a number of policies and should be disciplined/managed via a NGE Internal Plan.
3. A detailed internal NGE plan should outline how the company intends to credit/change NGE’s under the wide array of economic and experience scenarios underlying the actuarial modeling. Additionally, this plan would provide for how the company intends to change NGE’s under other conditions, such as law changes
4. Additionally, the illustration and NGE actuaries would provide a certification that NGE’s illustrated and actually credited, respectively, are consistent with the internal

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NGE plan or identify areas where actuarial NGE's practices deviated from the internal NGE plan.

D. A comparison of the new ERM structure to the existing structure is attached.

II. ERM 3-5 Year Strategic Plan – Solving a Four Dimensional Challenge

1. The Life Practice Council's (LPC) goal is to develop a series of initiatives to implement the new ERM structure in 3-5 years. This will require the involvement of and coordination with the Health Practice Council as well as the Academy's Financial Reporting Council.
2. Our major challenge is that the new ERM system must address a "multi-dimensional challenge", with four dimensions including product type, risk type, diversification structure, and risk measurement level.
3. The first dimension, product types, which is to be addressed in the ERM structure, includes the following categories (individual and group, as applicable):
 - A. Variable Annuities – separate and fixed account, with and without guarantees
 - B. Fixed Annuities
 - C. Equity Indexed Annuities
 - D. Variable Universal Life – separate and fixed account, with and without guarantees
 - E. Universal Life – with and without secondary guarantees
 - F. Traditional Life – participating and non-participating (term and whole life)
 - G. Long-Term Care
 - H. Long-Term Disability and possibly short term DI
 - I. Medical
 - J. Other such as Dental and Accidental Death?
 - K. Hybrids of any of the above
4. The second dimension reflects the various risk types that need to be addressed for each product type. Risk types (this may include both mean and volatility risk) include:
 - A. Asset Risk (C-1)
 - B. Mortality & Morbidity Risk (C-2)
 - C. Other Pricing Assumption Risks e.g. persistency, expense, reinvestment risk not covered by C-3 measures(C-2)
 - D. Equity Risk (C-3)
 - E. Interest Rate Risk (Includes level of interest rates as well as volatility risk) (C-3)
 - F. Business Risk (includes items like modeling risk and delays in rate approvals) (C-4)
 - G. Risk of new growth or lack of growth or availability of reinsurance (historically has been in the C-4 catch-all).
5. The third dimension is risk diversification/correlation
 - A. Diversification/correlation between risk types
 - B. Diversification/correlation between product types
 - C. Diversification/correlation between issue years
 - D. Other ?
6. The fourth dimension is the risk measurement level for the other three dimensions. This includes the entire distribution of potential ERM results along a continuum. Current key points include:
 - A. Reserves
 - B. RBC
 - C. Integration of feedback loops and other review processes

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7. Since completing all components of this four-dimension challenge will take many years, our goal needs to be identified and complete a small number of key initiatives which become “representative” anchors for the remaining initiatives.
8. Representative anchors should be used to initially define future structure, recognizing that some adjustments will be necessary for:
 - a. other follow-up initiatives
 - b. changes based on experience with initial structure and
 - c. improvements in modeling and ways to accomplish follow-up reviews
9. In order to successfully move forward, it is critical that all risk measurements levels be addressed together on each initiative
 - A. Thus, RBC and reserves should be addressed for each anchor initiative in a structure that addresses both within the structure. The structures developed for each anchor need to be compatible with each other and support the underlying ERM objectives and needs.
10. The priority of each initiative should be based upon balancing the long-term need to move towards a fully integrated ERM system with the short-term needs to focus on key issues of current concern to regulators

III. Short-Term Priorities – Next 24 Months

1. Key goal is to develop and successfully implement representative anchors for C-2 and C-3 risks.
 - A. We would expect the C-1 and C-4 components of these initiatives to continue to be maintained or tweaked based on the current RBC approach. One exception may be to fold in that C4 could include modeling risk and is a bridge to ERM issues in general – i.e. a process with controls is more valuable than a result that gives a formula based number. Will need to clarify options/tradeoffs for required capital, disclosure, sensitivity testing needs and peer review needs.
 - B. For pragmatic reasons, first few anchors should be completed at the product level.
 - C. Thus, correlation diversification at the product level would be addressed, but diversification/correlation between products would need to be deferred.
2. Variable Annuities – C-3 Phase 2 and Reserve Initiatives
 - A. Projects scheduled for completion in 2005 and 2006
 - B. Good representative anchor for C-3 equity timing/mismatch risk
 - C. VA equity C-3 risk component may be scaleable to VUL separate accounts and equity indexed annuity (equity portion only)
 - D. Question – is VA fixed account C-3 interest rate risk component scaleable for fixed annuities, or is C-3 Phase I work better?
 - E. VA C-2 work is not an adequate anchor for C-2 mortality risk
3. Universal Life RBC and Reserves
 - A. Needs to be addressed for secondary guarantee projects
 - B. Scope may need to include linkage to term and whole life products
 - C. Could be used as C-2 mortality anchor
 - D. Question – how would C-3 interest risk anchor work
4. Equity Indexed Annuities
 1. Builds off of C-3 equity risk and interest risk anchors completed by projects 1-3 above
 2. Additional work focuses on correlation of equity and interest risks
5. Long-Term Care

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- A. Possible morbidity anchor
- B. Will need to address other assumption risk portion of C-2 risk
- C. Will need to address changes to best estimate assumptions over time
- D. Other risks (reinvestment, rate increase delays)

IV. Long-Term Priorities – 3-5 Years

1. Complete remaining C-3 equity/interest and C-2 mortality/morbidity projects, based on representative anchor structure developed by VA, UL, and LTC projects.
 - A. C-2 mortality assumption for deferred and immediate annuities, traditional life, and health products
 - B. C-2 morbidity assumptions
 - C. C-3 interest structure for remaining life, health, and annuity
 - D. C-3 equity structure for VUL
2. C-1 risk – describe project and how to bring it into bigger picture. What work can/should be started now?
3. C-4 risk – describe broadening needed to cover all risks, new skill set needed, etc. Suggest high-level education should start in 2005.
4. Diversification/correlation between product types and risk types – need plan. Suggest our goal is to educate and lay framework in 2005. A useful avenue to explore will be building on the use of copulas by regulators to control allowed diversification credits.
5. Coordinate development of educational materials and training of both practitioners and overseers.
6. Identify necessary tools and studies to support this initiative such as:
 - a. industry experience studies to support the development of risk distributions for smaller companies, or to illustrate industry “averages” for regulator or professional needs
 - b. industry studies to analyze the relationship of assumptions (e.g. interest rates and policyholder behavior, interest rates and company behavior)
7. Engage tax authorities in discussion

IV. Immediate Next Steps

1. Finalize this Document to first share with the AAA Practice Councils and LHATF. Then this should be shared as part of an ongoing dialogue with the following groups;
 - Professional – SOA Committees, CAS, CIA, IAA Insurance Regulation Committee, AICPA
 - Industry – ACLI, AHIP, BC/BS
 - Regulator – CATF & CATDF, NAIC committee that liaisons with IAIS acctg. committee
2. Finalize Excel Summary sheet to share with above groups
3. Flesh out controls/regulatory comfort issues and options
4. Lay out education plans for the above groups and then coordinate with them to leverage for expanded audiences.