



# Summary of Risk Margins Research

NAIC International Solvency and  
Accounting Working Group  
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# What is GNAIE?

- GNAIE is an industry organization of US, Bermudian and Canadian based insurers.
- The mission of the GNAIE is to assist North American and global standard setters and regulators in cooperation with the global insurance industry and with insurance and other financial services industry trade associations:
  - To support high quality insurance accounting standards that are useful, understandable, comparable and reliable; that preserve the insurance industry's level-playing field access to global capital markets; and that provide good disclosure to the insurance industry's diverse constituencies;
  - To support high quality insurance solvency standards that provide useful and effective statutory solvency measures to protect the interests of policyholders and other stakeholders while encouraging competitive insurance markets; and
  - To enhance cooperation, education and communication regarding insurance accounting and solvency among the insurance industry's standards setters, regulators, and diverse constituencies.



# GNAIE Member Companies



# The European Approach

- Fair value liabilities are a central component of European solvency (SST and Solvency II) and IFRS proposals
- European solvency proposals:
  - Set capital requirements based on the change in fair values in a distressed situation, over a one year time frame; current and 'post-distress' fair values are both critical
  - Measure available capital using a fair value balance sheet
- The IASB Insurance IFRS proposals have common attributes to the fair value methodology of SFAS 157.

# The Key Role of Risk Margins in Solvency II

- Required for valuation of liabilities when risks not hedgeable in financial markets
- For insurers, risk margins are critical for the proper determination of the valuation of liabilities with mortality, lapse, morbidity and non-life exposures
- Thus, MVM measurement is essential for measuring available capital and required capital

## Recognizing the Importance of Appropriately Measuring Risk Margins, Our Objectives Were To...

- Examine proposed methods for estimating risk margins for insurance products
- Assess the practical implications of estimating risk margins
- Consider whether current measurement principles were adequate for consistent implementation
- Determine the extent to which more specific guidance was needed to achieve consistent application across risks, products and companies
- Identify additional research to support appropriate and consistent application

# Summary of E&Y Research

- While various methods can be used to set risk margins, the cost of capital (CoC) method has emerged as being the most widely supported
  - Intuitive, thus easy to understand (Risk-free rate + Expected Earnings - set at 6%)
  - Similar to methods currently used by insurers and reinsurers to price insurance risks
- CoC method is intended to produce liability values that are consistent with market prices for insurance risk
  - As with all “mark to model” valuation methods, the appropriateness of results requires the ability to calibrate model parameters/results to market prices
  - This requires deep and liquid markets for the same or similar instruments
  - Current credit market turmoil shows how challenging such valuations can be even for traded instruments and especially in distressed circumstances

# Summary of E&Y Research

- For insurers, observable prices for liabilities, other than customers' premiums, are insufficient for adequate calibration
- This leads some to conclude that fair value systems for insurers are unreliable
- For others, it suggests that CoC measures at least should be consistent with current pricing practices, especially with respect to capital allocations and cost of capital rates

# Summary of E&Y Research

- Common US pricing practices are based on
  - Allocated capital adequate to support risks throughout the life of the business, not just those in the next year
  - Use of a regulatory reserve that is usually larger than the best estimate liability, which implicitly increases the capital allocation
  - Inclusion of the impact of taxes
- Current implementations of the CoC method are based on
  - Use of a “one year” capital measure, which assumes that capital is raised sequentially for risk manifestations in the next year
  - Carrying an underlying reserve at the best estimate level
  - No provision for taxes

# Summary of E&Y Research

- Solvency II risk margins will only equal pricing risk margins if an adjustment is made to the rate of CoC applied by Solvency II to the one year capital measure
- A CoC rate consistent with the amount of capital allocated must be used
  - For example, a 13% pricing target must be earned on capital sufficient to provide for long term risks, not just next year's risks

# Summary of E&Y Research

- Using the products illustrated in the paper, Solvency II's 6% CoC rate would need to be adjusted to produce an MVM consistent with pricing risk margins
  - Term insurance example – 6% would be increased to 9.6%
  - Casualty example – 6% would be increased to 14.6%
- Failure to utilize consistent capital and CoC assumptions creates the potential for:
  - Misleading fair values - likely to be understated for long term risks
  - Overstatement of available capital

# Summary of E&Y Research

- Risk margins also important to required capital as changes risk margins increase in distressed situations
  - Amount of capital typically increases due to re-assessment of risk, eg, post-Katrina
  - Cost of risk usually increases, eg, post-Katrina and current credit crisis
- Solvency II does not recognize the likely increase in risk margins in a distressed situation, potentially understating required capital
- Other findings include
  - CoC rates should be calibrated to reasonable after-tax pricing goals
  - Estimates of capital in future years' of the risk margin calculation may not adequately represent the actual forward capital requirement
  - Solvency II approximations for measuring the change in fair value of liabilities should be clearly calibrated to desired confidence levels and measurement horizons

# Summary of E&Y Research

- Significant calibration of the capital base and the cost of capital rate is needed to ensure that fair values are consistent with market prices.
- Each component of the CoC method should be addressed
  - Amount of capital
  - Assumed run-off of capital each period over the lifetime of the liability
  - Cost of capital rate per period

Complete report available at [www.gnaie.net/research.htm](http://www.gnaie.net/research.htm)