



**AMERICAN INTERNATIONAL GROUP, INC.  
ECONOMIC CAPITAL MODELING INITIATIVE &  
APPLICATIONS**

November 2007 Update

### INTRODUCTION

AIG has made significant progress to date on its economic capital modeling initiative that commenced in 2005 with today's focus being firmly on the applications across a wide range of AIG's decision-making processes. This summary describes AIG's economic capital model and addresses the following questions:

- I. What is economic capital?
- II. Why did AIG implement an economic capital model?
- III. What is the current status and plan for 2008?
- IV. What are the key challenges?
- V. What are the results to date?
- VI. What are the alternatives for utilizing excess capital?
- VII. How do the rating agencies view economic capital?

This update incorporates the progress made by AIG on its economic capital modeling initiative and applications since its August 2007 communication. AIG's major progress includes the following:

- We estimate that in the nine months ended September 30, 2007, AIG generated excess capital of approximately \$3 billion, representing the excess of generated net income over the increase in required capital due to growth in business volume. Available economic capital has also increased by hybrid capital issuances that receive substantial equity credit from rating agencies and reduced by share repurchases and dividend payments. In the nine months ended September 30, 2007, AIG's hybrid issuances totaled \$4.7 billion, while share repurchases (including payments advanced for repurchase of shares) and dividends paid totaled \$6.5 billion. This brings our third quarter 2007 conservative estimate of excess economic capital to a range of \$16 to \$21 Billion, including hybrid capital;
- We have assessed alternative risk retention and reinsurance strategies for exposures to U.S. natural catastrophes for our domestic general insurance businesses, in preparation for the forthcoming reinsurance renewal season;
- We have considered the economic costs/benefits of purchasing index-based excess of loss credit protection for our aggregate portfolio of reinsurance recoverables;
- We have evaluated alternative asset allocation strategies that leverage AIG's financial strength, taking account of regulatory constraints and economic considerations as well as long-term total return vis-à-vis short-term volatility for our life insurance businesses operating in low-yield environments;
- We have facilitated active capital management processes for the life insurance segments by incorporating economic capital analysis for potential transactions;
- We continue to assess capital mobility throughout the organization, developing principles and strategies to improve capital efficiency;
- We continue to engage in substantive discussions with rating agencies concerning AIG's enterprise risk management practices and economic capital applications;
- We have initiated engagements with the following external experts to perform independent reviews and certifications of the economic capital model:
  - Tillinghast business of Towers Perrin;
  - The Department of Risk Management and Insurance at Georgia State University's Robinson College of Business;
  - Rutter Associates; and
  - Barrie & Hibbert Limited.

### I. WHAT IS ECONOMIC CAPITAL?

Economic capital is an assessment of the capital required to cover potential, unexpected losses within a target confidence level and timeframe. To be consistent with a strong and stable AA target rating, AIG's required economic capital estimates are calculated at a 99.95 percent confidence level and a one-year time horizon. AIG has modeled five major risk categories that are consistent with financial services industry best practices -- property & casualty insurance risk, life insurance risk, market risk, credit risk and operational risk. Required economic capital is compared with available economic capital, defined as the difference between the economic value of AIG's assets and the economic value of AIG's liabilities, in each case across all of AIG's segments. Available economic capital is increased by hybrid capital issuances that receive substantial equity credit from rating agencies and reduced by share repurchases and dividend payments. In the nine months ended September 30, 2007, AIG's hybrid issuances totaled \$4.7 billion, while share repurchases and dividends paid totaled \$6.5 billion.

### II. WHY DID AIG IMPLEMENT AN ECONOMIC CAPITAL MODEL?

AIG's economic capital model is an important decision-making tool used for a wide variety of applications throughout the organization. It provides a more refined view of AIG's capital adequacy at multiple levels of the business, e.g., consolidated, business segment and major profit center level. It also provides a consistent and comprehensive framework to discuss capital and performance on a risk-adjusted basis internally within AIG and externally with the investment community, credit providers, rating agencies and regulators.

Management is able to apply the economic capital model and its results to a number of areas. This process enables AIG to better assess the relative economic value added by a business, product or transaction to AIG as a whole by comparing risk-adjusted returns to the related cost of capital. Capital efficiency is assessed more robustly with risk-adjusted returns for existing and new businesses taking account of regulatory, rating agency and economic requirements. The benefits of portfolio diversification are quantified and assessed across businesses, risk categories, and geographies. Following are some of AIG's applications of the economic capital model.

- *Business Performance:* Analysis of operating performance on a risk-adjusted basis using consistent measures across segments.
- *Capital and Asset Allocation:* Quantitative tool to optimize asset allocation within AIG's global investment portfolio and allocate capital to businesses providing the most attractive risk-adjusted returns.
- *Capital Management:* Methodology for optimizing AIG's capital structure and lowering the cost of capital, in part through utilization of capital markets to leverage AIG's capital base more efficiently.
- *Mergers and Acquisitions:* Quantitative inputs into decision-making related to mergers, acquisitions, divestitures and strategic investments.
- *Risk Management:* Approach to analyze economic risks and benefits of investment strategies and risk mitigation through reinsurance and hedging programs.
- *Cost of Regulation and Ratings:* Framework for analyzing the cost of maintaining capital to meet rating agency and regulatory standards for capital required to be held in excess of the economic capital required to support AIG's risk profile.
- *Product Development:* Detailed approach to develop and price products to meet market demand and to maximize economic value added.

## Economic Capital Modeling Initiative

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- *Management Compensation*: Framework to incorporate the importance of maximizing economic value added into management compensation programs.

AIG's economic capital model has augmented a review of certain segment specific business issues and assisted in the development of new business strategies. For example, economic capital analysis is now routinely incorporated into the assessment phase for mergers, acquisitions and divestures, and in the assessment of capital markets solutions. In the reinsurance area, economic capital considerations are fundamental to the development of optimal risk retention and reinsurance strategies. In the Asset Management segment, enhanced funding and investment strategies for AIG's Matched Investment Program have been developed. In the Life Insurance & Retirement Services segment, the economic capital model has been used for product development, pricing and hedging strategies for living benefits in the variable annuity business. For life insurance products in Asian markets, enhanced asset-liability management strategies have been formulated for long duration liability structures and low interest rate environments in certain markets.

### III. WHAT IS THE CURRENT STATUS AND PLAN FOR 2008?

Commencing in 2005, AIG developed a firm-wide economic capital model that incorporates financial services industry best practices, reflects AIG's distinct global businesses and respects regulatory constraints. Utilizing stochastic simulation techniques, where appropriate, AIG has enhanced its existing models and developed new models working collaboratively with business executives, actuaries, accountants and risk professionals.

During 2006, AIG produced initial results for required economic capital at the consolidated, business segment and major profit center levels, using year-end 2005 financial data. AIG also carried out detailed analyses for selected businesses and products where economic capital results were applied for decision-making.

Throughout 2007, AIG's focus has been on a wide range of business applications of the model together with the continued enhancement of the granularity of the model. For this purpose, AIG has engaged a panel of independent experts to provide further assurance to AIG's senior management, business segment executives and external stakeholders as to the validity of the model and its results for business segments and for AIG in the aggregate. The model has been developed by AIG's Enterprise Risk Management department in close collaboration with AIG's businesses. A comprehensive set of risk governance structures are in place supporting the model's inputs, assumptions and methodologies. During 2007, AIG completed its analysis of firm-wide economic capital requirements using year-end 2006 financial data. AIG is in the process of calculating mid-year 2007 results and plans to calculate year-end 2007 results in early 2008.

In 2008, AIG plans to extend the model's applications by building on the work performed in 2007 for a wider range of businesses, segments, geographies and product lines. Commencing in 2008, the economic value added for each of AIG's business segments will be considered as an element, alongside other existing measures, in the evaluation of senior management performance. The capital planning and allocation process will continue to be enhanced by incorporating the regulatory, rating agency and economic capital requirements for business segments as well as the assessment of the mobility of excess economic capital.

### IV. WHAT ARE THE KEY CHALLENGES?

Developing a consistent and comprehensive model for a global organization like AIG involves a number of challenges related to model consistency, data requirements and assumptions and organizational communication.

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- *Model Consistency:* Substantial internal discussion, external assistance and model prototyping will continue to be required to ensure a consistent methodology for AIG's different lines of business which have very different risk profiles. Model consistency is a pre-requisite for aggregation across different lines of business.
- *Data Requirements and Assumptions:* Since economic capital modeling involves estimating unexpected losses at a very high confidence level, AIG has expended and will continue to expend significant effort in gathering available data and developing assumptions and parameters to support simulation-based modeling.
- *Organizational Communication:* A considerable amount of time and effort will continue to be spent communicating the terminology, purpose, approach, results and business applications at various levels of the organization around the world.

While each of these challenges has influenced the pace of work, AIG believes that the end product has been a far more robust and widely accepted framework for business decision making.

### V. WHAT ARE THE RESULTS TO DATE?

Excess capital is defined as the surplus of available economic capital over required economic capital. Analysis of AIG's firm-wide economic capital requirements using year-end 2006 financial data affirmed that at year-end 2006, on a conservative basis, AIG had excess capital in the range of \$15 billion to \$20 billion, as AIG has previously disclosed.

In the nine months ended September 30, 2007 AIG generated excess capital of approximately \$3 billion, representing the excess of generated net income over the increase in required capital due to growth in business volume. Available economic capital is also increased by hybrid capital issuances that receive substantial equity credit from rating agencies and reduced by share repurchases and dividend payments. In the nine months ended September 30, 2007, AIG's hybrid issuances totaled \$4.7 billion, while share repurchases (including payments advanced for repurchase of shares) and dividends paid totaled \$6.5 billion. This brings our third quarter 2007 conservative estimate of excess economic capital to a range of \$16 to \$21 Billion, including hybrid capital.

AIG derives significant benefits from its diversification across its lines of business, risk categories and geographies. Diversification benefits significantly reduce required economic capital and, thus, increase AIG's estimate of excess capital. AIG measures its diversification benefits across its different business segments (General Insurance, Life Insurance & Retirement Services, Financial Services, and Asset Management) and across risk categories (property & casualty insurance, life insurance, credit, market, and operational risks).

- *Inter-segment diversification* is the difference between the required economic capital for AIG on a consolidated basis and the sum of the respective required economic capital amounts for the business segments if they were standalone entities. This diversification derives from different business segments having different risk profiles suggesting that their extreme-case losses will not occur simultaneously.
- *Inter-risk diversification* arises due to the fact that correlations are imperfect among different risk categories, such as insurance, credit and market risks. Inter-risk diversification exists within a business segment and for AIG as a whole.

Both inter-risk diversification and inter-segment diversification are significant for AIG and AIG continues to explore mechanisms for leveraging these benefits, taking account of the mobility of capital due to regulatory and rating agency requirements.

### VI. WHAT ARE THE ALTERNATIVES FOR UTILIZING EXCESS CAPITAL?

As a result of the need to meet rating agency and local regulatory requirements, not all of the estimated excess capital in the business units is readily available to be re-deployed or distributed. In addition, various frictional costs, such as taxes, may be incurred when moving excess capital from one jurisdiction or legal entity to another.

Efforts have been undertaken to analyze capital mobility throughout the organization. Over time, these analyses, combined with efforts to increase the awareness of both rating agencies and regulators of the merits and efficacy of AIG's new economic capital model and the significant effect of portfolio diversification, may allow additional flexibility concerning the mobility of excess capital. These issues are considered within AIG's broader capital management strategy. Based upon the updated economic capital results and continuing analysis of the factors described above, AIG continues to consider a number of alternatives to utilize excess capital:

- *Growth Initiatives:* AIG continually evaluates the economic returns associated with utilizing its strong capital position to pursue business opportunities by providing new products, more capacity, higher risk retention and richer product features.
- *Stock Repurchases and Dividends:* AIG will continue to consider returning excess capital to shareholders through share repurchases and/or increases in shareholder dividends.
- *Mergers, Acquisitions or New Business Opportunities:* AIG continually evaluates opportunities in mergers and acquisitions or new businesses that provide competitive advantages and generate risk-adjusted returns above AIG's cost of capital.

### VII. HOW DO THE RATING AGENCIES VIEW ECONOMIC CAPITAL?

AIG's overall business is highly dependent on ratings from the major rating agencies. AIG began reviewing its economic capital modeling methodology with the agencies in the latter part of 2006. During the first quarter of 2007, AIG completed a first round of substantive conversations concerning its economic capital initiative with four major rating agencies.

AIG's presentations were well received, and AIG believes they have formed a solid foundation for further discussions with them concerning the breadth and depth of its economic capital modeling initiative and management's commitment to use the results increasingly in its decision-making. As AIG continues to enhance its models and incorporate the results of the independent review, AIG will continue discussions with the rating agencies concerning its enterprise risk management processes, economic capital methodologies and its model results for their consideration in the rating process.

Each agency has its own method of evaluating capital which is in varying stages of development. The agencies are also developing frameworks for evaluating individual companies' economic capital modeling and the strength of their enterprise risk management practices. AIG is well placed to engage in these developments with the recent engagement of independent experts providing external stakeholders with added assurance as to the robustness of the model and its results. AIG's estimate of excess capital incorporates diversification benefits across its many businesses, products and geographies, allowing for the mobility of capital. AIG intends to continue to highlight the importance and relevance of diversification in future discussions with the rating agencies given that their current models vary regarding the extent to which diversification benefits are incorporated. It is not clear when or to what extent the rating agencies will rely more significantly on AIG's economic capital model as a supplement to their own proprietary capital models.

### **CONCLUSION**

AIG will need to balance (i) capital requirements to support the growth of existing and new businesses which meet AIG's risk-adjusted return expectations, (ii) market demands to return capital to shareholders, and (iii) regulatory and rating agency capital requirements. Balancing near-term and future opportunities will always require AIG to maintain capital in excess of that required to support its growth initiatives and target risk level.

Increasingly, AIG will use the results of the economic capital model as an effective tool in managing the competing demands for capital, optimizing risk-adjusted returns for AIG's investors and maintaining the capital strength required to support AIG's businesses and future growth opportunities.