

Article Title: ARCHIVE | Criteria | Insurance | General: Analysis Of Insurer Capital Adequacy Enhanced Data: (EDITOR'S NOTE: —This article is no longer current. It has been superseded by an article titled "Analysis Of Insurer Capital Adequacy," which was published on April 22, 2009.) The management of capital is one of the most intensely debated topics in the insurance industry today. It is a balancing act, satisfying shareholders' interests to optimize capital while providing policyholders and creditors a sufficiently conservative loss-absorbing cushion of equity. Given the multitude of risks that insurers incur and the ongoing earnings issues that many face, capital is often the cushion that executives turn to in order to maintain the credit quality that supports ratings. Standard & Poor's Ratings Services introduced a risk-based analysis of capital in the early 1990s for the life insurance, property/casualty insurance, reinsurance, and health sectors. Standard & Poor's capital adequacy ratio has become a benchmark to measure insurers' capital strength. However, much has changed in the 15 years since its introduction, and as a result, Standard & Poor's will be making several changes to its assessment of capital adequacy. These changes will become effective in 2006. Standard & Poor's applies a multi-faceted analysis to evaluating insurers' capital adequacy. In addition to Standard & Poor's capital adequacy ratio, analysts:

- Evaluate concentrations of risk.
- Review an insurer's capital planning and financial flexibility.
- Evaluate ratios such as growth in capital, risk assets to capital, liabilities to surplus, and reserves to surplus.
- Analyze the quality of capital.

Standard & Poor's focused enterprise risk management initiative will lead to a refined analysis of economic capital models, which will be used to enhance our opinion of a company's capitalization. However, the capital adequacy model will continue to remain a part of our analytic tools. Revised Criteria For 2006, Standard & Poor's will be substantially updating its risk-based capital model. There will be a fundamental change in approach, which will estimate capital required for a given rating objective based on the company's risk profile rather than expressing an insurers' capital adequacy as a ratio that is compared to a benchmark. Standard & Poor's will:

- Calculate the level of required capital at various target ratings given the risk profile of a company.
- Compare the insurer's actual total adjusted capital to the calculated required capital, which will now include asset-related risks.
- Calculate the redundancy or deficiency of required capital to total adjusted capital.

This level of capital adequacy is then expressed as a confidence level relative to various target ratings. For example, XYZ Insurance Co. (rated 'AA') has total adjusted capital of \$1.10 billion. The new model produces the following required capital by target rating:

TARGET RATING	REQUIRED CAPITAL (BIL. \$)
AAA	1.50
AA	1.30
A	1.00
BBB	0.80

As the table shows, if the company's capital target is 'AA', its actual total adjusted capital is deficient by 15% (\$200 million). The 'AA' target capital is defined as the amount of capital sufficient to absorb the company's specific risks at a 99.5% confidence level. The factors used to assess capital needs for all parts of the model will be reassessed, including those factors pertaining to asset risks, reserve risks, premium risks, mortality and morbidity risks, asset/liability risks, and general business/operational risks. These factors will be updated based on Standard & Poor's measurements of volatility over the past two decades for each of the risk factors in our capital adequacy model. The majority of this research should be completed during the first quarter of 2006. In the second quarter, Standard & Poor's will be discussing in detail any proposed changes with rated companies. In aggregate, we do not expect that our overall views of the insurance industry's capital needs will change substantially. However, there will be significant changes in capital assessments for individual risk factors, given this new data that is being used to assess individual risks' volatility. As a result, depending on companies' mixes of business and assets, some insurers will be assessed as having greater capital needs than is the case under the current capital model, while others will be assessed as needing less capital. It is important to emphasize that any new risk-based capital model that Standard & Poor's adopts will be phased into our analysis, with the new model results being run parallel to the results of the existing model during 2006. The updated models will increasingly be favored over the current models once the proposed changes have proven their reliability and worth. With each company Standard & Poor's rates, we will discuss its capital plans over the intermediate time horizon. These changes to our capital adequacy model will not have any immediate rating impact on companies that are projected to maintain capital adequacy levels consistent with Standard & Poor's existing expectations. However, for insurers with classes of business or asset classes that are assessed as having greater capital needs, we would ultimately expect them to hold greater capital or be

assessed as having a lower level of capital adequacy, which could have ratings implications. Although these model revisions will provide rating committees with improved insights into the part of the rating analysis relating to capitalization, the expectation is that these updates will quantify and make explicit a number of the currently implicit adjustments that rating committees already routinely apply to the interpretation of existing model outputs. It is common for a rating committee to determine that an insurer's capitalization is different from what the capital adequacy model benchmarks imply. For example, an insurer with significant risk concentrations could have extremely strong capital adequacy as measured by a model, but the committee might conclude that its capitalization is strong at best. The ultimate product of the new capital model will provide greater insight at various rating categories regarding what the target capital level is for an insurer compared with reported capital. This will provide greater rigor into the management of capital and the degree of variability around the company's assumed exposures.

**Role of Enterprise Risk Management** As recently mentioned in "Insurance Criteria: Evaluating The Enterprise Risk Management Practices Of Insurance Companies," published Oct. 17, 2005, on RatingsDirect, over the next year, Standard & Poor's will continue to develop robust processes of evaluating insurers' economic capital processes to better inform our overall view of financial strength and capitalization in particular. A dynamic view of capital would complement and enhance our existing view of capital adequacy as well as provide a prospective view of capital adequacy. This review will only be performed for companies that are found to have effective and coordinated processes for risk control, extreme event management, risk-management culture, and risk models. For such companies, a valid model of economic capital could theoretically provide credible predictive information about the risks inherent in the business of the company. They have effective procedures for maintaining within predictable bounds their risks and their actual losses from risk. These evaluations of economic capital will be used in conjunction with our existing static, risk-based measures of capital adequacy. Although Standard & Poor's does not have its own economic capital model to evaluate insurers, we do review companies' own models to better assess their exposure to various stress scenarios. This multi-tiered view of capital will combine the greater consistency of risk-based capital models, which are also less assumption-dependent than dynamic models, with the advantages of economic capital models, which are more prospective and comprehensive in the assessment of risks. Standard & Poor's update of its measure of capital adequacy incorporates new information into our analysis that can better evaluate the risks being assumed by the insurance companies. Our risk-based capital models are a valuable tool in analyzing the capital adequacy of complex insurance groups and provide useful peer comparisons across major and medium-sized companies and groups. However, our capital models only constitute one part of our analysis of capitalization, alongside a range of other measures. Moreover, capitalization itself is only one of the eight principal rating factors considered by rating committees, the others being Management and Strategy, Competitive Position, Operating Performance, Investments, Liquidity, Financial Flexibility, and our recently codified criteria for assessing Enterprise Risk Management. Consequently, perceived strengths and weaknesses in certain areas of the analysis are frequently offset or reinforced by strengths and weaknesses elsewhere. The combination of these factors leads to an inherent stability of ratings, and in and of itself, the revision to this analytical tool is unlikely to result in any significant number of rating changes.

**Catastrophe Risk** Standard & Poor's already updated its catastrophe criteria for reinsurers (mono-line specialists as well as multi-line reinsurers) in June 2005 (see "Larger Losses And Better Modeling Prompt Changes To Property Catastrophe Criteria," published June 27, 2005, on RatingsDirect). These updated catastrophe criteria are not changing further following the significant catastrophes in the third and fourth quarters of this year. The updated catastrophe criteria for reinsurers are based on a net exposure 1-in-250-year scenario for property risks only as the basis for capital charges. One of the more significant changes to these catastrophe reinsurance criteria was the application of potential aggregate losses as opposed to occurrence losses as the basis for capital charges. These updated reinsurance catastrophe criteria are already being tested on reinsurers in 2005 and will be applied within capital and rating expectations in 2006. From a primary insurance perspective, Standard & Poor's will be upgrading its analysis of catastrophe risk and imbedding a property-line-only, net-exposure-based catastrophe capital charge. This will likely increase capital requirements for primary insurance companies that are currently assessed catastrophe capital charges based on net premiums written. These updated

catastrophe criteria for primary companies will be developed, tested, and incorporated within ratings and capital adequacy expectations in 2006.