Article Title: ARCHIVE | Criteria | Insurance | General: Enhanced Criteria To Evaluate European Insurers' Capital Adequacy Data: (EDITOR'S NOTE: —This article is no longer current. It has been superseded by an article titled "Analysis Of Insurer Capital Adequacy," which was published on April 22, 2009.) Standard & Poor's has introduced a new capital adequacy model to be used in analyzing European insurance companies and groups. Standard & Poor's capital adequacy modeling plays an important role in its analysis of capitalization. Its capital models for property/casualty and life/health companies have long been established in the U.S. Although similar analyses have been conducted on European companies for several years, the new criteria makes the analyses more consistent with the goal of creating an increasingly global platform for insurer financial strength ratings. While the new model is consistent with a global approach, it recognizes the diversity of markets in Europe, the different products offered, and different regulation. This article addresses the important features of the model*. The model can be viewed as a regulatory early warning device and, in more general terms, a measure of how a company's or group's capital stands up to reasonably stressful (i.e. a 'BBB' level), but by no means worst case, underwriting and economic conditions. The model begins by adjusting reported capital onto a more realistic basis (e.g. by adjusting for hidden asset values and reserve adequacy) to determine total adjusted capital (TAC). TAC is then reduced by 'charges' to reflect realistic expectations of potential losses arising from credit risk and investment market volatility risk. The resulting level of capital is compared with a base level of capital appropriate to support the ongoing business activities at a 'BBB' rating level, which is the lowest secure rating level. The "capital adequacy ratio" (CAR) is expressed as follows: Thus an insurer's capital adequacy is viewed as good if the CAR exceeds 100%. The ranges of capital adequacy consistent with certain rating levels are shown in table 1. Table 1 Capital Adequacy Ranges Per Rating Level CAR INDICATIVE RATING LEVEL ASSESSMENT OF CAPITAL ADEQUACY Below 100% BB or lower Vulnerable 100%-125% BBB Good 125%-150% A Strong 150%-175% AA Very strong Above 175% AAA Extremely strong It should be noted that the CAR is an important element in assessing overall capitalization, but not the only one (other quantitative and qualitative measures are used). Furthermore, CARs based on historic data are much less important than expectations of future CARs in determining ratings. Furthermore, capital is only one variable affecting the final rating outcome. GAAP or Statutory? The primary sources of information used for capital models are GAAP financial statements. The quality of financial information and accounting bases used vary considerably among countries, and this has been accommodated in the model. However, consistency is increasing as a result of the European Union directives and emergence of International Accounting Standards. Local GAAP statements provide a greater level of consistency than statutory returns, which vary considerably by country (and for reinsurance are nonexistent in many European countries). This differs from the U.S., where the focus is on detailed statutory filings. Company or Group? The focus of analysis for ratings of European companies is generally the parent company's consolidated financial statements because of the more detailed information normally available at the group level. Furthermore, consolidated accounts capture better a group's capital profile, which may not be discernible from operating insurance companies' financial statements (e.g. by eliminating the effect of double leverage). Standard & Poor's Insurance Group Rating Methodology** outlines criteria for evaluating insurance groups. This is founded initially on the analysis of a consolidated group, treating it as if it were a standalone company, and determining a rating for the group. Then, in assigning ratings to insurance company subsidiaries, determinations are made as to whether subsidiaries are core, strategically important, or nonstrategic to the group. Capital adequacy is then assessed for a group inclusive of its core and strategically important subsidiaries. Where subsidiary companies are viewed as nonstrategic, they are evaluated separately and adjustments are made to deconsolidate them from the group's capital adequacy model. The key elements of the model are explained below. Total Adjusted Capital The starting point for determining TAC is the company's/group's reported capital. This is adjusted to reflect the following: The model treats minority interests as a part of a group's TAC since that capital is normally under the control of the parent company's management. TAC includes allowance for debt instruments to the extent they are viewed as having equity-like characteristics (hybrid equity). Hybrid equity includes instruments issued by group companies and debt downstreamed as equity capital to operating insurance companies. The maximum amount of hybrid equity that may be included in TAC is limited depending on the applicable

rating category (see table 2). TAC includes an adjustment to give full credit for understated investment values, except for bond investments backing life business liabilities. EU directives permit companies to value their assets at cost, amortized cost, market value, or some combination thereof in their GAAP financial statements. Where market values can be reliably established, these values are included in TAC. This not only relates to equities and property, but also to bonds, except in those limited cases where they are required to be held to maturity. Bond investments backing life liabilities, where the company matches the term and rate of return applicable to these liabilities with appropriate bonds, are not uplifted to market value (neither do they bear a volatility charge). Goodwill normally will be excluded from TAC unless it relates to investments in companies viewed by Standard & Poor's as nonstrategic to the group. Even then, the maximum credit given for goodwill is 50%. Where catastrophe, equalization, and other "hidden" reserves are clearly equity capital in an economic sense, despite being treated as liabilities in companies' financial statements, TAC is adjusted to treat them as equity. Where the analysis of companies' nonlife loss reserves demonstrate that they are redundant or deficient, appropriate adjustments are made to TAC. TAC is adjusted to eliminate any explicit or implicit discount of nonlife loss reserves. After reserves are adjusted to adequate levels, a calculation of the estimated time value of money inherent in the reserves is made and is credited to TAC. Adjustments are made, if necessary, to include in TAC 100% of unrecognized life insurance business profit/surplus attributable to shareholders and 50% of the estimated discounted value to shareholders of future profits of life insurance business in-force. Value of in-force (VIF) is normally determined using embedded value techniques but, in the absence of an embedded value analysis, deferred acquisition costs (DAC), net of related deferred tax, may be used as a proxy. Nonlife DAC is eliminated from TAC since the premium risk factors have been reduced to allow for acquisition costs. TAC includes 50% of any unpaid amounts on partly paid shares since the company is legally entitled to collect these amounts, although not immediately. Table 2 Hybrid Equity Allowed in TAC RATING CATEGORY MAXIMUM AS % OF TOTAL CAPITAL AAA 15 AA 20 A 25 BBB and below 30 Investment-related Charges The company's/group's investments and other assets are reviewed for default, volatility, and credit risk, and appropriate 'charges' established. Corporate bonds are charged in accordance with their credit rating. The charge is based on the present value of expected default losses, which are assumed to occur over a 10-year period with a 50% recovery rate. Default and recovery expectations are based on Standard & Poor's default analyses. 'AAA'-rated government and government-agency bonds bear no charges. Mortgages are charged for the risk of foreclosure, delinquency, and restructuring. Nonperforming mortgages are charged at 14% and the remainder at 2%. All bonds are charged for volatility risk since the predominant basis of investment valuation is mark-to-market for local regulation. Furthermore, most bond portfolios are actively traded rather than held to maturity. Consequently, the solvency of many European insurers was volatile in the early to mid-1990s because of market interest-rate movements. The charges are made against the bonds' full market value, with the charge varying by the remaining period to maturity. The charges are consistent with an immediate 100-basis point increase in interest rates (bonds with periods to maturity of up to two years are charged at 1%, two to five years at 3%, and others at 5%). Volatility charges are not applied to bond investments backing life liabilities where the company matches the term and rate of return applicable to these liabilities with appropriate bonds. Equity shares are charged at 15% of market value, representing one standard deviation of the S&P; 500 Stock Index year-on-year movements since 1945. Preference shares are charged at 6% of market value based on Standard & Poor's estimate of average credit quality of such issues. Property is charged at a standard rate of 18% of market value. This rate is intentionally higher than the equity volatility charge to deal not only with the inherent volatility, but also the valuation risk. Unlike equities, properties do not have a liquid market with verifiable market prices. Property valuations typically assume the existence of a willing buyer. However, if there is strong evidence that this charge overstates (or understates) the volatility risk in certain countries, then the rate of charge may be varied at the analyst's discretion. Concentration risk is recognized and charged where aggregate holdings (of bonds and equity shares) in a single entity or property exceed 10% of TAC. The charge is graduated depending on the degree of concentration. A size-factor adjustment may be added to the investment-related charges. This recognizes that the larger a company's/group's investment portfolio, the more diversified it is likely to be and, therefore, better able to withstand various risks. No size factor adjustment is applied where

invested assets exceed ECU400 million, otherwise a factor of up to 2.5 is applied to investment-related charges (if total invested assets are less than ECU100 million). The factor is graduated where invested assets fall between ECU100 million and ECU400 million. Other Credit-related Charges Other credit-related charges stem largely from the reinsurance recoverable default risk. The charges are based on the observed default rate of reinsurance companies by rating category. The charges are applied to the amounts due from reinsurers and to ceded loss reserves (including those incurred but not reported - IBNR). No charge is applied where such amounts are secured by letter of credit or by reinsurance deposits. Other Noninvested Asset Other noninvested assets that are not subject to specific charges elsewhere in the model are subject to a 3% credit risk charge. Underwriting Risk And Reserve Risk For nonlife business, underwriting risk stems from the possibility that the actual cost of claims will vary from the expected cost implicit in the premiums currently being charged. Where this produces underwriting losses, these losses will need to be financed by capital. Reserve risk arises from the possibility that the actual cost of claims will vary from the expected cost reflected in the currently reported loss reserves. The reserve risk charge does not address the adequacy of current reserves, which is dealt with separately as a TAC adjustment. Instead, it measures the expected variability in reserve levels and the capital required to finance this. Such variations result from deviations from expected levels of frequency and severity, which can be exacerbated by changes in economic, legal, and social conditions. The premium and reserve charges adopted by Standard & Poor's to quantify these risks are founded on the methodology employed by the American Academy of Actuaries Property/Casualty Risk-Based Capital Task Force. The methodology employs an expected policyholder deficit (rather than a worst-case scenario) approach, with the policyholder deficit set to an acceptably low level. Expected claim costs are adjusted to a present value basis. Charges are established for each major class of business, reflecting the relative volatility of each class. The charges were calculated by the Task Force for application in the U.S. and therefore use the U.S. statutory classes of business. Standard & Poor's would have preferred to use data applicable to European experience, but, given the lack of consistent and reliable data within individual European countries let alone EU-wide, use of U.S. data was unavoidable. Adjustments have been made to convert the charges into a EU accounting class format. Certain adjustments were also made to reflect European experience where it differs significantly from the U.S. Furthermore, given the highly diversified assumed reinsurance market in Europe, separate charges have been established for each class of business for nonproportional treaty and facultative reinsurance business. Charges also have been added for credit business and finite reinsurance business. Premium charges are applied to premiums written net of reinsurance, but gross of acquisition costs (see table 3). Table 3 Premium Charges CLASS OF BUSINESS (%) DIRECT REINSURANCE PROPORTIONAL NONPROPORTIONAL AND FACULTATIVE Health 12 12 18 Accident 18 18 27 Motor 12 12 18 Marine, aviation, etc 17 17 26 Property* 19 19 30 Liability 27 27 29 Pecuniary 18 18 27 Credit 75 75 115 Finite N.A. N.A. 4 *For a reinsurer writing catastrophe business, the property catastrophe premium charge is replaced by the estimated impact on capital (including reinstatement premiums, but excluding tax recoveries) of a loss scenario representing a worst-case event (normally with a severity of at least a once in 100-year return period) relevant to the company/group. Reserve charges are applied to loss reserves net of reinsurance recoverable (see table 4). Table 4 Reserve Charges CLASS OF BUSINESS (%) DIRECT REINSURANCE PROPORTIONAL NONPROPORTIONAL AND FACULTATIVE Health 5 5 5 Accident 28 28 28 Motor 12 12 12 Marine, aviation, etc 16 16 16 Property 22 22 28 Liability 10 10 10 Pecuniary 28 28 28 Credit 25 25 25 Finite N.A. N.A. Life Reserve Risk Given the long-term nature of life insurance business, charges currently are based on reserves (and sums at risk). The EU regulatory minimum capital requirements are risk-based, although not highly sophisticated. Standard & Poor's view overall is that the regulatory minimum levels are relatively conservative and, accordingly, a 'BBB' level of capital adequacy can be achieved at 125% of the minimum requirement. The only exception to this being certain unit-linked business (where no policy guarantees are provided) that has no capital requirement. In this case, an asset management charge of 0.5% of the related linked assets is applied. Noninsurance Risk For groups with relatively small banking subsidiaries, a capital charge of 8% of risk-weighted banking assets is made. For larger banking operations, a separate, detailed analysis of capital adequacy normally will be performed. Where a company/group is involved in third-party asset

management, with the assets held off-balance sheet, an asset management charge of 0.5% of assets under management is applied. Further Enhancements To The Model The new model will remain under constant review and will be enhanced as new criteria are developed. However, the basic concept will remain unchanged. Standard & Poor's recently issued criteria for evaluating credit insurance and reinsurance operations. This criteria will be incorporated into the European model for companies writing significant levels of credit business. Standard & Poor's expects to issue further criteria related to European life insurance business later in the year. Furthermore, the treatment of catastrophe risk and charges for equity shares are under review. *A copy of the model with full explanatory notes can be obtained from Standard & Poor's on request. ** Standard & Poor's Insurance Group Rating Methodology can be found on Standard & Poor's website at www.standardandpoors.com/ratings.