

Article Title: ARCHIVE | Criteria | Insurance | Life: Embedded Value Is A Key Driver In Standard & Poor's Evaluation Of Life Insurers' Earnings Data: (EDITOR'S NOTE: — This criteria article is no longer current. It has been superseded by the article titled "Criteria | Insurance | General: Insurers: Rating Methodology," published on May 7, 2013.) Standard & Poor's Ratings Services views embedded value (EV) as the most informative tool for measuring the performance of life insurance business. This reflects the limitations of traditional statutory and GAAP accounting that only report variations of profit earned in the current accounting year. Although such measures are used for certain aspects of analysis, given the long-term nature of contracts written, they provide no guide to the real economic value being created or destroyed within the franchise. EV reporting, which has improved following the industry's adoption of European Embedded Value (EEV), is not perfect, but does seek to address this shortcoming by providing an estimate of the present value of future profits over the lifetime of the portfolio (see "Appendix: What Is Embedded Value?" below). Furthermore, EV provides greater granularity, identifying key business drivers and quantifying the development in terms of an economic value. The analysis of economic value provides greater insight into the value added by management through the impact of strategic (for example, distribution strategy and product mix) and tactical (for example, product pricing and cost cutting) initiatives. Undertaking this level of analysis requires a significant amount of qualitative judgment to distinguish between what management really influences--and can therefore be attributed to it--and the more generic market factors that affect performance across the whole sector. The detailed disclosure within the EV framework allows analysts to differentiate between such factors. In undertaking the analysis, Standard & Poor's assesses the appropriateness of assumptions: EV results are driven by the estimates of future profits, and so the assumptions used to make these estimates are critical. Even though the assumptions used are best estimates, the process of deriving them will involve a significant amount of judgment. To enable comparability of EV results between different companies, we review the assumptions for appropriateness relative to peers and in absolute terms. With the adoption of EEV, the consistency of economic assumptions (such as expected investment yield) used by different companies has improved considerably. It is more difficult to assess the appropriateness of demographic assumptions (such as mortality and lapses), however, because they are more company dependent. The auditing of EV results by an actuarial consultancy, as for most companies that calculate EV, provides additional comfort. Nevertheless, we ensure that the key assumptions used, such as mortality improvements and lapses, are sound.

**Differentiating Performance: Value Added By Management** We consider a wide variety of factors when assessing financial strength. To achieve a strong investment-grade rating, a company must demonstrate more than just robust capitalization, particularly in terms of quality of earnings and how management shapes the business to enhance value. Management's ability to preserve or add value is a function of a company's strategic and tactical initiatives, which shape competitive position and risk appetite. Analytically, these are largely qualitative factors, but EV provides a framework for quantifying their effect. The value added by management is assessed through analysis of the increase in a company's EV as a result of management actions. The primary contribution comes from the sale of profitable new business, measured by the value of new business (VNB). Management also adds value through enhancing the value in force (VIF), by, for example, reducing the cost base or implementing measures aimed at improving the persistency of the existing book. If management actions (or lack of them) have destroyed VIF, their impact will also be taken into account.

**A New Metric: Scale Of Value Of New Business** Standard & Poor's analyzes new business and in-force performance. Both are extremely important for enhancing value. Over time, however, unless a company can generate strong VNB, the franchise will ultimately shrink and in due course become less attractive to stakeholders. Exceptions to this rule do exist, but in general this principle would apply to a typical insurance entity. We have therefore introduced a new metric to assess the value added by selling new business: the ratio of VNB to VIF, termed the "scale of value of new business" (SVNB). We consider VIF to be an appropriate measure of the size of an operation, and we measure VNB relative to that size. SVNB could, however, be considerably distorted for start-ups and companies undergoing a major market repositioning. In such instances, we analyze the strength of SVNB case by case. High SVNB will normally result in a high return on EV, which is an important metric used by the investment community to assess the performance of life insurers. By its nature, this return affects life insurers' financial

flexibility. We consider the overall new business margin (NBM) to have somewhat lower importance than SVN for assessing value added by management. When assessing the strength of VNB, we do not differentiate between a company that has achieved high SVN while selling low-margin, high-volume business from a company with the same level of SVN that sells lower volumes of higher margin business. Nevertheless, in the U.K., for example, we are observing a strong correlation between NBMs and SVN. High SVN, therefore, is mainly a result of high margins on the new business written. Consequently, there is no clear example of a U.K. company that has successfully created strong VNB by selling high volumes of business with lower-than-average NBMs. In other markets, SVN is less dependent on NBMs. In chart 1, we have plotted the 2004 unadjusted SVN and NBMs for a number of life insurance operations based in the U.K., the Netherlands, Germany, and France, for which EV data is publicly available (some of them are part of the same group). Data is most widely available for U.K.-based operations, where EV reporting is the most widely implemented. There is similarly good coverage for the Netherlands. On comparison, U.K. companies appear to be adding more value from selling new business, as measured by SVN, than their Dutch counterparts, even though, on average, the NBMs achieved are similar. Limited public data is available for French and German life insurance operations, making comparison with other markets less credible at this stage.

**Value Of New Business: Drivers Of Value** In this section, we consider the key factors behind VNB achieved by U.K. life companies. We have chosen the U.K. because it represents the largest life market in Europe and has the most data to support our conclusions. We will perform similar analyses of other markets as disclosure improves. Standard & Poor's has analyzed U.K. companies' VNB to identify the key factors that differentiate the better performing companies. The four areas that determine management's ability to add value through selling new business are: Competitive advantage in higher margin products, Distribution capabilities, Differentiated service and product offerings, and Cost efficiency. In order to identify these factors and the role they play in a company's VNB, we analyze and compare the VNB and NBMs achieved both by different products and relative to the competition. The results enhance our assessment of a company's strategy and competitive advantages relative to competitors. Competitive advantage in higher margin products Product mix is the most important factor for the level of SVN, owing to significant differences in product NBMs. The achieved margin is a key factor for the level of SVN, ignoring risk at this point. Annuities and protection NBMs are the highest, and significantly exceed the margin achieved on pensions, which are the least profitable products (see chart 2). Companies with strong competitive positions in higher margin products such as annuities and protection have an advantageous position for achieving higher SVN. Legal & General Assurance Society Ltd. (LGAS; AA+/Stable/--) and The Prudential Assurance Co. Ltd. (AA+/Stable/--), through its unrated subsidiary Prudential Retirement Income Ltd., are the key suppliers of bulk annuities, the U.K.'s highest-margin product, and have achieved some of the highest SVNs. Both groups have established strong competitive positions in this market through accumulating significant expertise and very strong capitalization to write a large volume of business. Several other companies are exploring the prospect of entering this market, attracted by the potential large VNB contribution from this product. We view writing this business without the requisite skills to be high risk, however. Protection has the second-highest NBM. Well-established players in this market, such as LGAS, Norwich Union Life & Pensions Ltd. (AA/Stable/--), and Friends Provident Life and Pensions Ltd. (A+/Stable/--), have achieved substantial contributions to VNB from this product. Although several companies have entered this market in search of enhanced VNB, they have struggled to achieve scale. The increased competition has put pressure on margins, however. Pensions are the dominant products in the U.K., representing about one-half of sales, but they are the least profitable. This low profitability mainly results from high commission levels and fierce competition. For most companies, pensions add marginal VNB at best, while for some they make a negative contribution. Nevertheless, pensions business makes a considerable contribution to fixed costs and provides a base from which to sell other products. Overall, however, companies that predominantly write pensions face significant challenges in delivering acceptable SVN. Having a strong competitive position in several product segments and subsectors can be an important advantage in a company's ability to sustain high VNB. Such companies can adjust better to changes in consumer preferences and regulation, and focus their efforts on the more profitable products. Distribution capabilities Having access to a high-margin distribution channel is

another key factor for achieving high SVN. Bancassurance has the highest NBMs: it allows insurers to charge higher rates because it is less exposed to competition. The main bancassurers, such as HBOS PLC (AA-/Stable/A-1+) and Lloyds TSB Bank PLC (AA/Stable/A-1+), have the additional advantage of selling the business at marginal cost when it is sold in conjunction with banking products. Independent financial advisers (IFAs) are the largest distribution channel in the U.K. Even though, as a result of high competition, this is one of the lower margin channels, its contribution to VNB is significant due to its high volume of business. A strong position in this channel, therefore, could help companies achieve high SVN. Nevertheless, over-reliance on this channel, especially in low-margin pension products, could seriously reduce companies' ability to create value. Direct sales forces have largely closed, reflecting their high cost. Some notable exceptions include St. James's Place U.K. PLC (A-/Stable/--), which is successful by focusing on a higher-net-worth clientele that is offered a bespoke service.

Differentiated service and product offerings Differentiated product and service offerings provide an opportunity for companies to achieve higher NBMs. Friends Provident's VNB, for example, benefits from its superior system and service offerings in protection, which provide an important competitive advantage and allow the group to sell more business without compromising profitability. Cost efficiency A low cost base is perhaps the most apparent factor for achieving high SVN. Such companies can use their cost advantage to create VNB by charging lower rates and selling a high volume of business, or targeting a higher profit margin. Risk Adjusting The Value Of New Business In a perfect world, analysis of VNB and NBMs would be easy: the larger the VNB and NBM the better. It is not that simple, however. Delivering expected profit in the future will be more or less certain depending on the nature of the product and the sensitivity of future cash flows to the economic and demographic assumptions used. When we assess the new business value added, therefore, we also take into account the risk characteristics of the business: we do not just consider its expected profitability, but also form a view on the potential variability of actual profitability over the life of the product. For products for which we expect higher variability, we would expect higher NBMs relative to products with lower variability. When assessing the profitability of annuities, for example, we consider whether their current superior profitability is sufficient to compensate for the greater risk, given that they assume long-term longevity and investment risks. We make allowance for the risk by analyzing the VNB adequacy ratio (VNBAR). VNBAR is defined as VNB to the risk measure of the VNB. The risk measure is an estimate of the risk exposure of the business and is calculated as the impact on VNB of a combination of various stress tests. The stress tests used are consistent with the probabilistic basis of Standard & Poor's capital model charges. VNBAR is calculated at the product level to compare the risk-adjusted profitability of the products a company writes and between different companies selling the same product. The same measure is also used to compare the aggregate risk characteristics of VNB between different companies. In the U.K., products exhibit materially different risk profiles (see chart 3). Initial analysis indicates that annuity providers are subject to the largest risk adjustment. Returns still appear robust relative to the risk of adverse experience, however. Value In Force: Extracting Value Although selling profitable new business is the primary way management can add value, Standard & Poor's expects management to also enhance the value of the existing book. There are companies such as Resolution PLC (BBB+/Stable/--) in the U.K., for example, for which enhancing the value of the existing book is the main source of adding value. If management had the perfect predictive EV model, earnings derived from VIF would simply be the product of the unwind of the discount rate (RDR). On reporting dates, however, companies disclose experience variations or the effect of assumption changes to account for deviations from modeled assumptions. We view some of these as direct results of management action, while others are more a function of marketwide forces. A true assessment of management and performance requires differentiation of the impact of these factors. When assessing the overall value generated by management in addition to VNB, therefore, we take into account the impact of management actions on VIF. We do this by allowing for experience variations and the impact of assumption changes on items that can be significantly influenced by management, such as expenses and persistency. For example, reducing unit costs will increase VIF because the updated projected profits will be based on lower expenses. Similarly, if management has improved the persistency of profitable business by, for example, improving the quality of service, existing policies will be projected to remain in force for longer, and therefore their contribution to VIF will increase. Investment return

significantly higher than assumed will also considerably increase VIF. Given that investment performance is largely driven by investment conditions, however, we will not give credit for that component of the EV return unless the company significantly and consistently outperforms the market over five consecutive years, taking into account the risk characteristics of the company's investment policy. We also look at VIF's sensitivity to various risk factors to ascertain the risk exposure. This gives us an indication of the likely impact of management actions on VIF and therefore an indication of the extent to which management can create or destroy value. For example, the more sensitive the VIF of a block of business is to persistency, the higher the impact of management actions to improve the persistency of the business.

Appendix: What Is Embedded Value? EV provides an estimate of the worth of a life insurance operation. It is equal to the sum of its net assets and VIF. VIF is the present value of future profits expected to arise from the policies in force. The present value is calculated at the RDR, which reflects the risk of the business. Allowance for cost of capital is also made in VIF. VNB is the present value of the future profits of all new policies sold during a particular period, usually a year. It is calculated at the time of sale and allows for the initial expenses. Under EEV principles, NBMs are calculated as VNB divided by the present value of future new business premiums, and expressed as a percentage. Traditionally, they were expressed as the new business contribution divided by premiums measured on an annual premium equivalent basis. One of the reasons why VIF changes from year to year is the difference of actual from expected experience during the year. That impact is usually shown in accounts as "experience variance". If the experience variance is considered permanent, it will lead to an assumption change, which appears as the "impact of changes in assumptions". Both factors are usually quantified by companies performing EV calculations. Some companies also provide a breakdown of these factors by risk. EV profit is the increase in EV over the year after adjusting for capital flows. The main components of EV profit are the unwind of VIF at the RDR, VNB, experience variance, and the effect of changes in assumptions. EV return is calculated as EV profit divided by the average EV during the year. Most companies calculating EV measure the impact of using alternative bases for VIF and VNB. This helps assess the sensitivity of VIF to changes in the underlying assumptions.