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# Variable Annuity Equity-Based Guarantees Are Weighing On North American Life Insurers' Financial Strength

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# Variable Annuity Equity-Based Guarantees Are Weighing On North American Life Insurers' Financial Strength

A significantly prolonged or more severe bear market will make it much more difficult for North American life insurers with variable annuity (VA) business to weather the downturn with their financial strength unaffected. Insurers are experiencing a tail event characterized by volatile and depressed equity markets, resulting in equally depressed asset-based fee revenue derived from VA account values, sharply higher liability and capital requirements for VA equity-based guaranteed minimum death benefits and living benefits, and increased hedging costs. The effect these stresses will have on any insurer's financial strength depends prominently on broad diversification and earnings strength from other lines of business, the maintenance of appropriate capitalization, contract holder living benefit option utilization experience, and the effectiveness of enterprise risk management (ERM).

Although Standard & Poor's Ratings Services does not expect the prevailing negative macroeconomic conditions to impair the long-term financial strength of the insurance industry, they likely will lead to short-term stress, particularly at the holding company level. (For a complete analysis, including details of our negative outlook on the U.S. life insurance sector, see "2009 U.S. Life Insurance Outlook: Sector Outlook Remains Negative As Companies Grapple With Market Turmoil" and "North American Insurance Holding Companies Are Facing Reduced Sources Of Cash Flow And External Funding," published Dec. 12, 2008, on RatingsDirect.) However, life insurers with material VA risks could see their financial strength erode more than the financial strength of insurers without such exposure. VA business poses some unique risks to the life insurance sector. Therefore, Standard & Poor's is taking a look at how its analytical approach takes into account the impact that these risks have on life insurers' financial strength. (For details on our criteria, see "Criteria For Evaluating The Impact Of Variable Annuity Equity-Based Guarantees On North American Life Insurers' Financial Strength," published Jan. 29, 2009, on RatingsDirect.)

## Factoring Equity Market Level And Volatility Into The Ratings

Standard & Poor's has always recognized the relative volatility of VA earnings and capital requirements versus the more stable and greater value-added protection-oriented insurance products. This distinction was underscored by the prior bear market from 2001-2003, which made it evident to market participants and observers alike that stand-alone VA businesses are much too volatile on their own to support the highest financial strength ratings. When the dust settled from the simultaneously adverse equity, credit, and recessionary forces, the average financial strength of the life insurance industry was a notch lower, with Standard & Poor's average rating moving to 'A+'/'AA-' from 'AA-'/'AA'. Since then, the industry significantly improved ERM practices and accumulated substantially redundant capitalization, which buttress insurers' financial strength in the face of a deteriorating economy. Without these developments, the financial strength of life insurers' with material VA exposures would be under even greater pressure. (For more on how these risk management and capital developments affect ratings, see "For North American Insurers, Strong Risk Management And Capital Adequacy Are Key Defenses Against Recession," published Dec. 12, 2008, on RatingsDirect.) Nevertheless, we are experiencing unprecedented market declines and negative macroeconomic forces that are beyond normal expectations for the ratings. Because incremental capital requirements accelerate as the markets decline, a sustained 17%-22% decline in major market indices from levels at the close on Dec. 31, 2008, is expected to be significant for financial strength ratings and

rating outlooks. At such low market levels (i.e., an S&P 500 index of approximately 700-750), capitalization for many insurers could be adequate at best. Declines from those levels will risk exposing insurers to potentially inadequate capitalization for the ratings when their ability to fund accelerating capital needs weakens as a result of lower earnings, a higher cost of capital, and increasingly reluctant capital markets.

Notably, on Dec. 2, 2008, we revised our rating outlook on Manulife Financial Corp. and its operating companies, which are rated 'AAA', to negative from stable because of the companies' reduced financial flexibility and exposure to equity-based guarantee risks with limited hedging to mitigate the risk. It's important to note that this action reflects the higher bar associated with maintaining the very highest ratings. (For the complete rating action rationale, see "Manulife Financial Corp. And Operating Subsidiaries Outlook Revised To Negative," published Dec. 2, 2008, on RatingsDirect.)

## **Dynamic Hedging Of Living Benefits Is Proving Its Worth**

We regularly review the quality of insurers' hedging programs as part of our ERM evaluation process. We consider hedging for VA products to be a major risk control program for many insurers. We look for risk identification, risk monitoring, limits and standards, limit enforcement, and risk learning in every insurer's control processes.

When it comes to VAs, we look to see that each insurer has identified the risks in these products, including equity market, product design, policyholder behavior, longevity, risk modeling, and financial reporting risks. Behavior risks include those related to benefit election rates, asset allocation, and client retention. In some situations, client retention might increase losses and in others it might decrease losses. It is important for insurers to recognize and understand this dynamic.

Our ratings reflect our view of the risk inherent in products that provide equity-based guarantees, the financial risk mitigation necessary to maintain them, and the quality of the hedging programs that provide the mitigation. Without these programs or tremendously redundant capital, insurers would have substantially weaker financial strength than they do today.

Although indispensable to maintaining financial strength, even sophisticated hedging programs were never intended to be 100% effective. When market volatility is low, hedge effectiveness, measured by how much the hedge asset increases in value compared with the increase in the liability, typically exceeds 90%-95%. As market volatility and hedging costs increased during the past year, hedge effectiveness of some programs declined to 75%-80%. Part of the reduction is attributed to companies buying less protection for some greeks (measures that define different aspects of market risk) as the cost of doing so increased. (The primary greeks that life insurers hedge are delta, gamma, vega, rho, and cross greeks.) However, strong ERM policies and controls ensure that protection does not decline below the company's specified risk-tolerance levels. In addition, breakage from basis mismatch risk contributed to the decline in hedge effectiveness. This occurs when the equity funds in some VA accounts decline much faster and further than the reference indices used to hedge them, and it's exasperated by extremely volatile market movements, such as those that have occurred in the past few months.

We generally expect companies to maintain hedge effectiveness at these levels (75%-80%) or higher to protect VA balance sheets from severe deterioration, which is consistent with strong ratings. If life insurers did not hedge, the capital call for increasing living benefit liabilities would vastly exceed the capital call for increasing death benefit liabilities. However, because of the high effectiveness of hedging programs, we expect that the capital call required

to fund living benefit liabilities, although material, will be less extensive than the capital call required to fund unhedged death benefit liabilities.

The cost of hedging living benefits currently exceeds the long-term average cost assumed in benefit pricing, primarily because of the extreme market volatility. When assessing financial strength, we will consider the extent to which fees for VA benefits cover the cost of hedging.

Derivatives-based hedging programs also increase counterparty credit exposure, especially in volatile markets, and insurers must manage this exposure to avoid undue concentrations with any particular counterparty. The failure of Lehman Brothers had a negligible impact on dynamic hedge programs because the counterparty exposure was spread broadly across a deep financial market.

## **Reinsurance For Living Benefits Remains Limited**

Since the introduction of living benefits six years ago, it has been incumbent on insurers to manage nearly the entire associated risk without material amounts of reinsurance because the risk management and mitigation technology was unproven and reinsurers feared tail risk resulting from extreme events. In the past two years, reinsurers selectively offered reinsurance capacity to VA writers on some products, but it never became widely available. Major insurers offering VAs continue to depend primarily on their own risk-management expertise.

Smaller insurers offering VAs that lack the scale to support highly sophisticated risk management are often limited to writing less-generous living benefits and typically pay a relative premium for reinsurance that, when available, typically caps the risk transferred. This means smaller insurers could still face significantly higher capital requirements if the current market downturn causes exposures to exceed the coverage purchased. Some smaller insurers opted for prepackaged systems from consultants to enable them to monitor and hedge their equity market risks.

In 2007, The Hartford Financial Services Group Inc. entered into very long-term derivatives contracts with sophisticated and diversified financial counterparties to transfer the market risk on more than one-quarter of its withdrawal benefit exposures. Hartford achieved this only because of the strength of its risk management programs. Until the equity markets stabilize, it is unlikely that any insurer will be able to similarly transfer living benefit risk.

Reinsurance and long-term derivatives exchange hedging execution risk for counterparty risk, which must also be managed to mitigate default and concentration risk. Given the limited amounts of living benefit risk transferred relative to the counterparties' financial profiles, the counterparties are expected to be able to meet their obligations.

## **Unpredictable Policyholder Behavior Can't Be Hedged, Which Raises The Stakes**

During the previous bear market, contract holders recognized how much more important guaranteed minimum living benefits (GMLBs) are compared with guaranteed minimum death benefits (GMDBs). GMLBs protect the value of retirees' VA accounts during retirement, whereas GMDBs protect the value of retirees' VA accounts only for their heirs. Living benefits became and still are the crucial product feature driving VA sales. Insurers responded with an array of increasingly rich equity-based living benefit options. In 2007, new VA sales totaled \$179 billion, with assets reaching \$1.49 trillion at year-end before the equity markets declined materially. More than 70% of new VA sales elected some form of living benefit rider.

The key difference between GMDBs and GMLBs is that the contract holder must die for the death benefit to be payable, but the contract holder can choose when to utilize a living benefit option. This discretion makes the ultimate cost of living benefits less predictable, so life insurers cannot directly hedge it in the financial markets. Current utilization of living benefits is about 5%, but insurers generally assume ultimate utilization will be about 10x higher. If actual utilization exceeds assumed utilization, the unhedged costs will be material. Further declines in the equity markets will disproportionately increase the possibility of an unexpected early spike in living benefit utilization, which will increase costs more than expected. If this occurs while capital redundancy levels and financial flexibility are weakened, we could take negative rating actions on a number of life insurers. The material uncertainty of living benefit utilization is motivating insurers to explore developing behavior-neutral VA living benefits to improve their ability to hedge the risks.

## **Death Benefits Remain Unhedged And Reinsurance Is Unavailable**

Although increasing death benefit reserves (a noncash charge that companies fund with capital) and capital requirements are a concern, liquidity is very manageable for these risks because contract holder mortality incidence is relatively smooth and predictable. The lack of intentional optionality in death benefits prevents material antiselection, so when the markets recover, the death benefit net amount at risk will also decline. For these reasons, insurers generally do not hedge death benefit risks.

The 2001-2003 bear market revealed that life insurers had significantly underpriced VA death benefits, so insurers increased the fees charged for guaranteeing them. These higher charges are becoming even more inadequate to cover the death benefit reserve increases resulting from the depressed equity markets. The lack of explicit hedging to mitigate the risk means that insurers must fund the required reserve increases out of capital, which is increasingly scarce. Statutory reserves, which are based on Actuarial Guideline XXXIV, conservatively assume an additional 14% drop in fund values on the valuation date before projecting account value growth. This assumption increases the death benefit net amount at risk and brings even more contracts into the money for reserve purposes, which accelerates the reserve increases and compounds the reduction in capitalization.

Furthermore, almost all insurers assess asset-based fees for death benefits instead of a more naturally exposure responsive cost of insurance (COI) rate assessed against the net amount at risk. A COI structure would generally better immunize this risk by increasing the insurance charges simultaneously with, and in proportion to, the increase in the net amount at risk. Most insurers don't take this approach because annuities are not underwritten for mortality, and asset-based fees are far easier to explain to contract holders. Also, there is somewhat of a natural hedge when a contract has both a living benefit and a death benefit because only one of these benefits can be collected on. It remains to be seen whether this economic cycle will be harsh enough to cause insurers to adopt a more benefit-responsive fee structure for death benefits.

GMDB reinsurance was plentiful and cheap during the 1990s because direct writers and reinsurers generally underestimated the cost of providing death benefits. During the 2001-2003 bear market, death benefit reinsurance for new VA contracts became impossible to obtain at any price, and it remains essentially unavailable today. Reinsurance on existing contracts remains in force and continues to provide protection for insurers fortunate enough to have purchased it. However, the majority of all VA sales are exchanges of older contracts for new contracts. The living benefits available on new contracts are a major motivation for such exchanges, and brokers and other sales distribution leverage the opportunity to generate new commissions.

## Product Design Can Help Control Risk

The design features of some GMLB and GMDB products can help insurers to mitigate the risks of living benefits. The first popular living benefit was the guaranteed minimum withdrawal benefit (GMWB), which provides for payout of a fixed percentage, typically 5%-7%, of the benefit base annually over a specified period. Lifetime income guarantees now dominate living benefits in two main forms, the guaranteed minimum lifetime withdrawal benefit (GLWB), where the fixed percentage is provided for life, and the guaranteed minimum income benefit (GMIB), where the benefit base is used to purchase a payout annuity from the general account. Guaranteed minimum accumulation benefits (GMABs) ensure that the account value will be topped up to a certain level after a specified number of years, typically 10, if actual account performance is lower. But, GMABs have had limited popularity.

Product features and limitations that help manage living benefit risks include multiyear resets of the benefit base instead of annual or more frequent resets, as well as restrictions on the available funds to those that are less volatile (i.e., lower beta funds) or to funds that are more readily hedged. Additional product features that help limit risk include automatic rebalancing among less correlated funds, waiting periods before the option can be utilized, and a reduced benefit base when the benefit is utilized before a certain duration or attained age.

The most basic benefit base is a return of premium, but the benefit base may include enhancements such as ratchets, roll-ups, high water marks, or combinations thereof. The inclusion of percentage rate compounding on many products causes the benefit base to continue increasing even when account values are declining, which aggravates risk instead of mitigating it.

The benefit base on GMIBs is only available when used to purchase a payout annuity from the general account, and the annuity purchase rates tend to be somewhat conservative. In addition, the benefit option usually can't be exercised during the first 10 years of the contract. But once the income benefit option is exercised, the cost of the equity guarantee is permanently locked in and monetized because the risk or benefit from further market declines or recoveries are eliminated.

By contrast, after withdrawal benefits are utilized, account values remain invested in the market. Because the protected withdrawals occur over periods ranging from 14 years to the lifetime of the contract holder, an opportunity remains for the equity markets to recover and reduce or eliminate the cost of the remaining benefit. Incidentally, market recoveries that exceed the remaining benefit base also accrue to the benefit of the contract holder.

In the previous bear market, a death benefit design flaw known as dollar-for-dollar withdrawals created an unintended opportunity for some contract holders to withdraw all but a nominal amount from their contracts and lock in sizable death benefits for little cost. Life insurers quickly removed this design flaw from new contracts, but in the cases of contracts that had this feature and large net amounts at risk (typically well into six figures), many took advantage of the opportunity at the expense of the insurer. (For more on unintended death benefit optionality, see "The Dollar-For-Dollar Loophole: Another Item on Variable Annuity Writers' List of Woes," published July 30, 2003, on RatingsDirect.)

Over the past few years, efforts to arbitrage insurers' mortality underwriting on insurance policies have increased, to the detriment of insurer profitability. The capital markets are always eager to identify arbitrage opportunities, and if they are successful in doing so with very complex VA contracts with equity-based guarantees, it would add to

insurers' pain.

## Fee Rates For Living Benefits Are Expected To Increase

Another way for insurers to manage risks and ensure profits on VAs is to raise the fee rates they charge for living benefits. A number of companies have announced their intent to do so on new contracts, and more seem likely to follow suit. Currently, fees for guarantees range from 25 basis points (bps) of the account value to more than 80 bps, depending on the risk profile of the benefit. Fees could increase by as much as 30 bps or more in some cases. To keep the absolute fees at levels that consumers will accept, insurers likely will curtail the richest benefits. In addition, on many VA contracts, insurers have the ability to increase fees on existing riders but are reluctant to do so, at least until it is evident that the price increases on new contracts will stick. These changes will prospectively help insurers reduce risk, but they will do little to recover the cost of existing guarantees. Competition among the very large VA writers is significant, and insurers historically have been slow to make the first pricing change. We believe this is a necessary step to manage the increasing cost of this business.

## Evaluating Operating Performance

Companies may increase the fees they charge on living benefits, but, ultimately, the asset-based fee revenues from VAs rise and fall in proportion to the equity markets, which have declined by almost half from their peak in late 2007. The lower markets result in reduced revenues and earnings on VAs. We expect earnings to decline but remain strong and supportive of the ratings for the more diversified insurers that have a significant proportion of other businesses less correlated with the equity markets.

Equity market declines will hurt GAAP earnings through an increase in noncash expenses related to deferred acquisition costs (DAC). To the extent that a sustained decline in equity markets reduces VA estimated gross profits, an adjustment to assumptions may occur, causing DAC to amortize faster and companies to write down a portion of them. An acceleration of DAC amortization and DAC write-downs directly affects measures of GAAP net worth, which typically are used in covenants on revolving bank loans and other indebtedness. Therefore, we are actively monitoring insurers with regard to maintaining compliance with these covenants, because breaching a covenant would accelerate repayment of financing.

## Primarily A Capital Event

Standard & Poor's believes that the main issue companies with significant VA business are facing is the need to maintain enough capital to fund increased liabilities, because the cash outflow on living and death benefits will occur over many years and should be manageable. Each insurer offering VAs has its own unique set of other businesses that provide diversification and a counterbalance to its VA business, which may be under severe stress. Capital is increasingly expensive and harder to come by because of the prevailing negative macroeconomic forces and the intense competition for it. As the equity markets turned sharply lower, some insurers quickly braved the financial markets and raised capital needed to help protect financial strength. But an even more extreme downturn would threaten to exhaust that buffer.

With the same intent of ensuring flexibility and stability, a number of insurers also applied to the U.S. Treasury Department's Capital Purchase Program in an effort to obtain additional capital at a more reasonable cost than

currently available in the financial markets. Standard & Poor's views these applications as prudent given the prevailing economic conditions. Given the extraordinary circumstances, to the extent that insurers obtain such capital, we would treat the increase in leverage and fixed-charge costs associated with the undeployed portion as substantially neutral to the ratings. But to the extent that insurers deploy the capital to support their risks, we may view this as reducing financial flexibility, which could affect our opinion of financial strength.

We continue to actively monitor the effect of insurers' VA exposures on capital and operating performance. So far, companies largely have been able to manage these risks. And, as previously indicated, significant further declines in equity markets, if sustained, could adversely affect both capitalization and operating performance and significantly accelerate the erosion of insurer financial strength, attributable to VA risks.

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