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VA REINSURANCE—A VIBRANT MARKET

by Ken Mungan

It has been exciting to see the significant growth and activity in the Variable Annuities (VA) reinsurance market in 2007. As we begin 2008, the outlook for the market is very strong. In this article, we will review the history of the VA reinsurance market, the characteristics of deals being done today, the use of hedging in VA reinsurance, and trends that will influence future deals. Given the demographic trend of Baby Boomers entering retirement, there is no doubt that demand for reinsurance to support innovative variable annuities will increase.

The VA reinsurance market was very active during the bull market of the 1990s. During that period, it was common to transfer Guaranteed Minimum Death Benefit risk to reinsurers. Reinsurance premiums were set based on "real-world" stochastic analysis which assumed a 9- to 11-percent growth rate for the stock market. During the 1990s, hedging techniques had not been widely applied to reduce market risk associated with VA guarantees. Understandably, the performance of unhedged GMDB reinsurance business was poor during the bear market of 2000 to 2002.

The bear market caused a wide-spread shut-down of the VA reinsurance market. As a consequence of the bear market, direct writers implemented capital markets hedging techniques. The use of derivatives to reduce the risk associated with VA guarantees is standard practice in the variable annuity industry today.

Major reinsurers took a cautious approach to re-entering the VA reinsurance market. After monitoring the performance of hedging techniques for several years and carefully evaluating innovations in product design, established reinsurers came back to market in 2007. Today, reinsurers who are active in the market include:

- Munich Re
- RGA
- Swiss Re
- Union Hamilton (Wachovia)
- White Mountains

In addition to these established reinsurers, several investment banks have reinsurance subsidiaries that have completed transactions.

Transactions have been completed covering all types of VA guarantees: GMABs, GMDBs, GMIBs, and GMWBs. Transactions have included risk transfer covering base with riders and rider-only deals.

It is important to note that the VA reinsurance market is a global market. Reinsurers are active in North America, Asia and Europe. By building up a diversified book of business on a global basis, reinsurers can partially mitigate policyholder behavior risks and achieve a significant economy of scale.

The U.S. and Japanese markets are the most active. However, variable annuities are rapidly growing in other markets. The availability of reinsurance is helping to fuel this trend.

All VA reinsurers, as far as we are aware, employ capital markets hedging techniques. Techniques used are consistent with the techniques which have been used by direct writers since the bear market at the start of the decade. VA guarantees are treated as financial options. Option pricing techniques are used to value the guarantees and to estimate the market sensitivity to major equity indices, segments

of the swap curve, exchange rates, etc. A portfolio of financial derivatives is typically managed with the goal of maintaining a market neutral position.

These hedging techniques provide partial mitigation of the capital markets exposure. As such, a disciplined process of P&L measurement and performance attribution analysis is used to monitor and evaluate results. Industry best practices have developed for this process over the course of this decade, and VA reinsurers have taken care to apply these practices in their business.

In addition to applying option pricing techniques to management of capital markets risk, VA reinsurers apply these techniques to management of policyholder behavior risks. Lapse, withdrawal, and annuitization rates are not known with certainty. Structural elements in the underlying product design are commonly used to limit the financial impact associated with behavior risk. Increasingly, direct writers are reaching out to reinsurers during the product design process. By collaborating with reinsurers during the design phase, direct writers improve their chances of achieving a successful reinsurance transaction.

As the VA reinsurance market has developed, some direct writers have required reinsurers to adopt specific strategies to mitigate reinsurer credit risk. One technique that has been employed is the use of a benefit trust account to collateralize the fair value of the reinsured guarantees. Typically, premiums would be paid into the trust account; capital markets hedges would reside in the account, and there would be a periodic settlement process which governs the release of profits from the account. The settlement process uses an option pricing technique with objectively determined parameters to establish the settlement value for each guarantee. Typically, assets in the account in excess of the aggregate settlement value may be released as profit to the reinsurer. To the extent there is a shortfall, the reinsurer may be required to make a cash infusion to the account.

The VA reinsurance market is in a state of rapid development, and this process will likely continue. In particular, there has been significant activity in development of stand-alone guarantees on 401(k) and IRA accounts. As this market develops, reinsurance will be a critical component.

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In addition, there is a rapid pace of innovation in the retail VA market. Lifetime GMWBs are attracting significant interest in the market. For these innovative products, a successful reinsurance transaction provides an independent validation of the product design in addition to risk mitigation.

It has been exciting to participate in the development of the VA reinsurance market. Given demographic trends and the pressing need for compelling retirement security products, we expect the rapid pace of development to continue. ✺

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