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# Milliman Fixed Indexed Annuity Pricing Survey Summary

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## INTRODUCTION

Fixed indexed annuities (FIAs) have been one of the fastest-growing segments of the annuity market for the last several years. According to LIMRA, 2015 U.S. sales were approximately \$54.5 billion, which is 13 percent higher than 2014. The addition of living and death benefit guarantees to the fixed indexed annuity chassis has added substantially to the complexity of product pricing and asset-liability management (ALM).

Milliman undertook a survey of 16 companies early in 2016 to gain insight into common industry practices. The objective of the survey was to help indexed annuity writers understand the pricing practices and ALM strategies used by their peers in the industry, especially in light of the prevailing low interest rate environment and a possible rise in interest rates. Specific areas of focus included:

- Pricing metrics
- Lapse and utilization assumptions for living benefits
- Product changes that are due to low interest rates
- Product features to address rising interest rates
- Asset-liability management

The following are some conclusions and observations from the survey. Our conclusions and observations will not necessarily hold true for all companies or in all situations.

## PRICING METRICS

Pricing methods have become increasingly sophisticated with the advent of variable annuities. However, the more traditional pricing techniques and measures continue to apply to FIAs because FIAs are effectively spread-based products.

A majority of participants said that they use internal rate of return (IRR) as a primary pricing metric. Return on assets (ROA) was the second most commonly used metric.

Other metrics used by the companies include profit margins, market-consistent value of new business, breakeven year, and GAAP return on equity (ROE).

Other pricing metrics (as stated by a few participants) were cost of funds, net investment earned-rate less cost of funds, and stat-

utory value of new business. Incorporation of market-consistent principles in pricing is not a prevalent practice.

The acceptable ranges for IRR, return on assets (ROA), and return on equity (ROE) were similar for most companies. The discounting methodology used to arrive at the ranges differed among participants, with an equal number of them using cost of capital and expected earned rates. Some participants also used risk-free rates, earned rates, cost of capital, or hurdle rates based on the pricing metric they were calculating.

## LAPSE AND UTILIZATION ASSUMPTIONS FOR PRICING INCOME RIDERS

Guaranteed Lifetime Withdrawal Benefit (GLWB) features on fixed indexed annuities give rise to some of the more interesting and complex pricing and risk management challenges. GLWB can be an incentive for the policyholders to persist despite less-than-favorable index crediting. Companies have largely altered their lapse assumptions to take that behavior into account. The majority of participants stated that they use dynamic lapse assumptions to model GLWBs, while some participants mentioned that they reduce base lapses statically.

The vast majority of participants model income-rider utilization via a cohort method, i.e., they segment the pricing cells into cohorts, with each cohort having a specific utilization rate.

About two-thirds of the companies assume an income rider utilization of less than 100 percent, while the rest assume a 100 percent utilization. For the companies that do not model 100 percent utilization, the non-utilization assumptions range is fairly wide, from 5 percent to 30 percent for policies with income riders.

Around a quarter of participants use predictive modeling to study and analyze policyholder behavior when setting the above assumptions. We did not ask companies to provide details on their predictive models, but we think of such models as formulaic representations of policyholder behavior that are derived from statistical models and reflect key characteristics of the policies, the policyholders, or the economic environment.

## PRODUCT CHANGES THAT ARE DUE TO LOW INTEREST RATES

Low interest rates have become the new normal. While the average daily 10-year Treasury rate since 1945 has been approximately 6.35 percent, this benchmark rate has been below 3.75 percent for the last five years. The low interest rate environment has resulted in over 75 percent of the participants making changes to their FIA products along the following lines:

- Lowered interest spread requirements
- Added market value adjustment (MVA) features

- Lowered commission rates
- Reduced richness of bonus features
- Reduced richness of the Guaranteed Minimum Withdrawal Benefit (GMWB) riders via reduction to payout and roll-up rates and shortening the roll-up period
- Increased rider charge fees
- Stopped selling a few products

In addition, a few respondents stated they started selling FIAs because of the prevailing low interest rates.

## PRODUCT FEATURES TO ADDRESS RISING INTEREST RATES

In addition to the persistent low interest rates there is a potential risk that is due to rising interest rates. The following are some ways in which companies mitigate the risk of rising interest rates:

About two-thirds of the participants stated that the MVA feature, combined with surrender charges in their product, will mitigate adverse effects of a spike or a gradual increase in interest rates.

Roughly one-third of participants mentioned that GMWB portions and/or the guaranteed income shadow accounts of their product portfolios provide an offsetting risk profile.

## ASSET-LIABILITY MANAGEMENT (ALM)

FIAs have a zero floor on the index-based interest credited, hence there is limited equity risk associated with the living and death benefit guarantees. Interest rate risk is the primary market risk and ALM is the preferred industry tool to manage this risk. We asked participants if they have an ALM plan to address the potential volatility in interest rates.

Around 40 percent of participants have plans to address both gradual and sharp increases in interest rates via one or a combination of rate-setting activities, continuous monitoring via stress analysis, or adjusting asset portfolio durations, bond futures, floating interest rate assets, interest rate swaptions, or interest rate caps.

A quarter of participants do not have a plan for a gradual increase but do have plans in place for a sharp rise in interest rates via one or a combination of interest rate swaptions, interest rate caps, reinsurance activities, or additional liquidity from other product portfolios. The rest do not have any plan in place for either a sharp rise or for a gradual increase in interest rates.

With regard to goals of ALM and managing the guaranteed benefits:

- All participants hedge index-based interest crediting.
- All or a majority of participants mention that duration matching and addressing liquidity concerns were the two

most important goals of their hedging programs. Some participants mentioned that convexity matching was one of the key considerations of their ALM programs.

- Over a third of participants used their ALM programs to manage tail risk.
- None hedge Guaranteed Minimum Death Benefits (GMDBs) and GMWBs, nor segregate assets between policies with and without income riders.
- None have considered a buyout of high in-the-money (ITM) policies, similar to VA buyouts, as a part of their liability in-force management strategies.

## CONCLUSION

The survey showed there is consistency in pricing practices across the participants. It also showed that, in addition to ALM, modifying product features is another way to manage interest rate risk. Current lapse and income rider utilization assumptions appear to be simplistic, thus we anticipate further development of innovative methods such as predictive modeling to more accurately reflect policyholder behavior.

As this article was being written, the Department of Labor released the final version of its Fiduciary Rule. In the new regulations, fixed indexed annuities (FIAs) have been included in the Best Interest Contract exemption (BIC exemption) along with variable annuities (VAs). Although FIAs did not fall under the BIC exemption in the proposed rule, their complexity (caps, participation rates, spreads, multiple indices, etc.) makes the new classification understandable. It is still too early to know how this new regulation will impact the annuity market. One thing is certain: FIAs have been a popular product in recent years, and FIA writers will continue to innovate and develop new strategies to address the evolving market and regulatory environment. ■



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