Variable Annuity Policyholder Behavior:
Are We Out of the Dark Yet?

Guaranteed Minimum Withdrawal Benefits

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Agenda

- Brief Product Description – Lifetime GMWB
  - GMWB is a feature in a variable annuity
- Know Your Sales Story
- Policyholder Behavior Assumptions
  - Income Utilization
  - Income %
  - Dynamic Lapse / Base Lapse
  - Spousal / Beneficiary Continuation
  - Fund Selection / Investor Behavior
- Experience Reporting – The Key

Brief Product Description
Lifetime GMWB

- Cost 40 – 80bps
- Withdrawal Rates
  - 5% for all ages
  - Varies by age
- Enhancements Rates
  - 5% simple – 10% simple
  - 5% compound – 7.25% compound
- Investment Restrictions
  - Fund of Funds or Asset Allocation Models
  - BYOP (Build Your Own Portfolio)
  - Involuntary Transfers

Know Your Sales Story

- What is your Value Proposition?
  - Selling Client Solutions or Features
  - Are you pricing what your wholesalers are selling
- Client Profiles
  - Income Solution
  - Protection Solution
  - Deferred Income Solution
- Lincoln’s Story
  - Investment Story
  - Up-market designs

Income Utilization – Dynamic Utilization

- Withdrawals Begin upon Market Decline
- Modeling Challenges
  - What Market Drop Begins Withdrawals
  - Incentives to delay withdrawals
- Pro’s
  - Withdrawal protected money first
  - Higher income needs in a down market
- Con’s
  - Is policyholder behavior that optimal?
  - Are customers purchasing for future income needs?
  - Should changes in rho and vega influence income start?
  - High Sensitivity in Greeks
  - Hard to Measure and Update Assumption

Income Utilization – Time Based Utilization

- Withdrawals based on Life Events
  - Key Age or Key time since issue
- Modeling Challenges
  - % of Income Buyers vs Comfort Buyers
- Pro's
  - Consistent with Client Profiling
  - Lower complexity in assumptions
  - Easy to evaluate experience
- Con's
  - Customers are not ostriches – they look at market
  - What if you are wrong?

Income Utilization
Comparison of Time Based vs Dynamic Utilization

- Time Based vs Dynamic Utilization
- Ratio of Valuation Premium
  - Time Based / Dynamic Utilization
  - Age 60
- 4Q06 – 1.14
- 1Q08 - 1.50
- Why?

Income %

- Does it vary by:
  - Market – Qualified vs Non-Qualified
  - Age
  - Gender
  - Version of WB

Dynamic Lapse / Base Lapse

- Base Lapse
  - Vary by distribution channel
  - Vary by income vs comfort buyer
  - Vary by age
- Dynamic Lapse Assumption
  - What is the slope of the decrease?
  - At what level of market drop are lapses impacted?
    - AV versus Present Value of Future Withdrawal?
  - Sensitivity depends on base lapse assumptions

Spousal / Beneficiary Continuation

- Upon death the spouse or beneficiary can continue the benefit until the benefit base equals zero
- Methods
  - Non-lifetime models may have assumed q_x=0
  - Dynamic Continuation
    - Continuation Depends on Market Level
  - Static Continuation, continuation = x%
- Complications
  - Age differential in the lives
  - Multiple continuations possible
  - Death Benefits
  - When AV=0, continuation should be 100%

Fund Selection / Investor Behavior

- Formula for Investor Volatility
  - Classification – High Vol, Med Vol, Low Vol, Limit
- Allocation by Investment Model / FOF
- Gender Impacts
  - Does gender impact investment choices?

Experience Reporting – The Key

- Capture and Analyzing Experience is Key
- Key Reports
  - Income Utilization
    - Are your reports biased
    - Systematic vs Non-Systematic Withdrawals
    - Time Based ,Market Based, Both?
  - Income Percentage
    - Qualified vs Non-Qualified Split
  - Investment Reporting
  - Lapse Reporting
    - Validate Dynamic Formula

Disclosure

- *Variable annuities are long-term contracts designed for retirement purposes. Certain benefits or features may be available through a variable annuity. Such benefits or features may have additional charges and expenses along with limitations and restrictions associated with them, which may or may not be advantageous in meeting long-term goals. These additional charges and expenses should be considered carefully before purchasing. Early withdrawals are subject to surrender charges and taxes including a 10% penalty if taken prior to age 59 1/2.* ***Variable annuities are sold by prospectus. For product and feature information, including fees, charges, limitations, and restrictions are provided in the prospectus.***

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