Equity-Based Insurance Guarantees Conference

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VA Guarantee Reinsurance Market Status

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VA Guarantee Reinsurance Market Status

Equity-Based Insurance Guarantees Conference
November 5, 2018 (Session 1B: 1045 – 1215 hours)
Ari Lindner

Munich RE

VA Guarantee Reinsurance Market Status

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- 25 Years of VA Guarantee Reinsurance – A (Brief) History
- Current Reinsurance Market
- Available Reinsurance Structures
- “Reinsurability” Traits
- The Role of Reinsurance

25 Years of VA Guarantee Reinsurance – A (Brief) History

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- Reinsurance market began in mid-1990's
  - Insurers experimenting with enhanced GMDBs
- Supply has never been particularly robust
  - Brief exception in late 1990's
  - Typically between 0 and 2 serious proactive reinsurers
- Wide variety of reinsurance approaches / structures
  - Base contract vs. rider only
  - Inforce vs. New sales
  - Proportional vs. Non-proportional
  - Hedgeable risks vs. Non-hedgeable risks

Current Reinsurance Market

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- Inforce / Legacy VA blocks
  - Reinsurance availability stronger than in recent memory
  - Traditional reinsurers, specialty companies, Private Equity firms / groups
  - Motivated sellers – non-core business, potential volatility in income statement, changing capital requirements, etc.
  - Market pricing has rationalized – smaller gap between ceding companies and reinsurers
  - Rising interest rates help further close the gap
- New / Future VA Sales
  - Supply limited to 1-2 reinsurers
  - Complete (fully proportional) reinsurance can be available depending on product design and underlying funds

Available Reinsurance Structures – Hedge-like Reinsurance

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- Reinsurance that behaves (economically) very similar to a hedge program
- Available regardless of guarantee type, product design, or underlying funds
- Available on new sales and inforce books
- Non-hedgeable risks carved out / retained
  - Financial – Basis Risk, Long-dated volatility, etc.
  - Actuarial / Insurance – Mortality / Longevity, Behavior (lapse, annuitization, withdrawal)
- Cost driven by assumptions for non-hedgeable risks set at the discretion of the ceding company

Available Reinsurance Structures – Hedge-like Reinsurance

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- Can be limited or unlimited duration
- Reinsurance capacity can be significant / practically unlimited
- Structure tends to be complex
  - Regular data transfer is required
  - Typically periodic true-ups are calculated over the course of the reinsurance term
  - Requires strong administration / data teams on both sides
- Produces advantages (both economic and non-economic) compared to an internal or external hedge program, but cost should be similar
- May not qualify for insurance accounting treatment or reserve / capital relief

Available Reinsurance Structures – Fully Proportional Reinsurance

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- Reinsurance that fully mirrors the position of the ceding company
- More easily available for a limited subset of guarantee types, product designs, and underlying funds
- Available on new sales; can be challenging for certain inforce books (depending on guarantee features, fund availability, etc.)
- All hedgeable and non-hedgeable risks fully transferred
  - Traditionally the reinsurance claim payment on GLBs (GMIB / GLWB) is a lump sum, meaning that investment and longevity risk post-claim is retained by the ceding company
- Cost driven by assumptions for non-hedgeable risks set at the discretion of the reinsurer

Available Reinsurance Structures – Fully Proportional Reinsurance

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- Typically unlimited duration
- Reinsurance capacity can be limited depending on reinsurer's appetite for non-hedgeable risks
- Structure tends to be relatively simple
  - However, regular data transfer and strong administration capabilities are still required
- Cost exceeds that of a comparable hedge program due to the additional risks being transferred
- Qualifies for insurance accounting treatment and reserve / capital relief
  - Some jurisdictions (New York) may be an exception

Available Reinsurance Structures – Partially Proportional Reinsurance

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- Reinsurance that partially mirrors the position of the ceding company
- Available regardless of guarantee type, product design, or underlying funds
- Available on new sales and inforce books
- A subset of the non-hedgeable risks are partially or fully retained
  - Financial – Basis Risk, Long-dated volatility, etc.
  - Actuarial / Non-Financial – Mortality / Longevity, Behavior (lapse, annuitization, withdrawal)
- Cost driven by assumptions for non-hedgeable risks set by
  - Ceding company (for fully retained risks)
  - Reinsurer (for fully or partially transferred risks)

Available Reinsurance Structures – Partially Proportional Reinsurance

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- Typically unlimited duration
- Reinsurance capacity can be limited depending on reinsurer's appetite for the non-hedgeable risks being transferred
- Structure tends to be complex
  - Regular data transfer and strong administration capabilities are required
  - Typically periodic true-ups reflecting retained non-hedgeable risks are calculated over the course of the reinsurance term
  - May include an experience refund component
- Cost exceeds that of a comparable hedge program due to the additional risks being transferred
- Should qualify for insurance accounting treatment but may receive only partial reserve / capital relief

Available Reinsurance Structures – Summary

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Structure	Availability	Complexity	Duration	Non-Hedgeable Risks	Cost	Cost Set Primarily by	Accounting / Reserve / Capital
Hedge-Like	High	Medium	Limited or Unlimited	Fully Retained	Low	Ceding Company	Low / None
Partially Proportional	Medium	High	Unlimited	Partially Retained	Medium	Varies by Risks Transferred	Partial
Fully Proportional	Low	Low	Unlimited	Fully Reinsured	High	Reinsurer	Full

“Reinsurability” Traits – Product / Guarantee Designs

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- GMDB is most reinsurable
  - Smallest variability due to non-hedgeable risks (particularly behavior)
  - Fully proportional reinsurance may be achievable
- GMAB is highly reinsurable
  - Primary behavior risk driver is lapse
  - Fully proportional reinsurance may be achievable
- GMIB is more challenging to reinsure
  - Behavior risk drivers are lapse and annuitization
- GMWB / GLWB is most complex
  - Multiple key behavior risk drivers, including lapse, withdrawal start / stop timing, and withdrawal amount (compared to maximum)

“Reinsurability” Traits – Product / Guarantee Designs

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- For GMIB, “hybrid” withdrawals increase model complexity and cost
  - Small annual partial withdrawals are assessed against the Guaranteed Value on a “dollar for dollar” basis
- Optional Reset features can be challenging to model (for any benefit)
- Other product features can impact behavior risk
  - For GMWB / GLWB, availability of “auto”-maximum withdrawals will affect partial withdrawal amount (as percentage of maximum)
- Features that restrict policyholder optionality improve reinsurability
  - Age limits
  - Waiting periods
  - Fund / investment restrictions

“Reinsurability” Traits – New Business vs Inforce Blocks

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- Inforce Blocks present both pros and cons with respect to reinsurance
  - Behavior experience helps reduce uncertainty in assumptions
  - Most pre-2010 policies allow funds that are more difficult to hedge effectively, potentially driving up the cost of reinsurance (if basis risk is transferred)
- Inforce Blocks that have offered policyholder “buyout” options may present unique issues
  - Assess the degree of anti-selection inherent in “buyout” offers
  - Determine the applicability of pre-”buyout” experience (mortality / behavior)
- Reinsurance of New Business involves additional complexity
  - May require different prices by cohort of business (each month of sales) based on age / gender distribution of new sales, changing capital market environment, etc.

“Reinsurability” Traits – Financial Risks

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- Hedgeable Financial Risks
  - Equity / Bond (Index)
  - Interest Rate
  - Volatility (up to 5-10 years)
- Non-Hedgeable Financial Risks
  - Basis Risk – mismatch between fund and mapped index or indices
  - Volatility (beyond 5-10 years)
  - Correlation
- Hedge program – inherent risks
  - Dynamic “buy high / sell low” – balance overtrading vs reduced precision
  - Operational / Error

"Reinsurability" Traits – Actuarial / Insurance Risks

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- Mortality / Longevity
  - Typically reinsured pre-claim but not post-claim
- Behavior – Key is to estimate drivers of behavior and their "efficiency"
  - Lapse / Surrender
  - Partial Withdrawal (proportional / dollar-for-dollar)
  - Annuitization (for GMIB)
  - GMWB / GLWB Withdrawal (timing / amount / "excess")
- Other risks
  - Fund switching / rebalancing
  - Additional deposits (if applicable)

The Role of Reinsurance

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- Transfer meaningful risk off the balance sheet
  - Reduction in both level and volatility of required statutory reserves / capital
- Exit a non-core line of business
  - Shareholder value can be created by removing uncertainty related to legacy VA guarantee risk
- Provide long-term certainty around liability cost
  - Or at least some boundaries, in the Partially Proportional structure

The Role of Reinsurance

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- Supplement existing hedge program
  - Diversification of risk management tools, credit and other risks, etc.
  - Partially or fully transfer non-hedgeable risks
- In lieu of establishing a hedge program
  - May be more cost effective, particularly for companies with smaller sales volumes
  - Terms and conditions (collateral, e.g.) may be more favorable
- Reinsurer as collaborative partner
  - Help design new products / guarantees
  - Customize efficient reinsurance structure for inforce liabilities
  - “Free consulting” – please use responsibly

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