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Risks in Onboarding Life Reinsurance Assumptions

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Assumption setting in reinsurance transactions

Assumption setting operates in the context of business model and regulatory regime

Asset/Investment Assumptions

- Asset and investment assumptions are highly company specific
- They follow the company's investment guidelines and risk appetite
- Assumption setting is typically done in collaboration with Investment function
- Assumptions are also guided by regulatory requirements

Liability/Insurance Assumptions

- Liability assumptions are generally block-specific but often influenced by overall company practices
 - Mortality-related assumptions are mostly data-driven
 - Mortality improvement reflects the company's view of mortality trend, and is generally consistent across products
 - Lapse-related assumptions are country- and product-specific. But dynamic interest-sensitive behaviors sometimes pose challenges
 - Other assumptions such as premium pattern, expenses, credited rates, etc. reflect experience data, product features and the operating structure.
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- We will focus on liability/insurance assumptions in this session.

Assumption setting differences between insurers and reinsurers

Direct Insurers

① Pricing

- Directly connect to policyholder market
- Use experience and industry data to set assumptions

② Underwriting

- Full control of the underwriting process, including medical, financial and personal risk underwriting
- Have feedback loop to Pricing esp. on accelerated UW

③ Assumption management

- Have seriatim data and detailed demographics
- Can conduct granular analysis

Reinsurers

① Pricing

- Focus more on reinsurance market
- Use experience and industry data to set assumptions

② Underwriting

- Rely on block experience and industry data
- Additionally use inforce data for benchmarking

③ Assumption management

- Often need to consider regulatory scrutiny and approval
- Work with cedant on inforce management and data

Reinsurer Assumption Onboarding Risks

Reinsurers have unique advantages and disadvantages in setting assumptions

Disadvantages

- Transaction data may lack details, context, or the intuition direct insurers have
- Tight deal pricing timeline
- Consistency and implementation issues
- Regulatory scrutiny and approval

Advantages

- Often have ceding company's assumptions
- Obvious pricing mistakes are sometimes known or fixed in an aged block
- Longer experience history
- Reinsurers sometimes have multiple blocks to use as comparison

Mitigations

- Reinsurers use inforce and industry data to mitigate the data limitation gap
- May engage consultants for appraisal and analysis
- Sometimes reinsurers request third-party reinsurer quotes
- Use sensitivity testing to understand the risks

A Closer Look At Assumption Onboarding – FA Dynamic Lapse

Dynamic lapse is complicated by the lack of data in high interest rates

Data

- Lapse varies by credit rates, duration, product features and other factors
- Affected by agent incentives and new offering in the market
- Practices in setting dynamic lapse functions vary by company

Judgment

- Reliability of data's predictive value when macroenvironment changes
- Behavior in high interest rate is uncertain
- Is my inforce block different?

Integration

- Reserving vs. capital measure
- Hedging considerations
- Consistency vs. product-specific considerations

A Closer Look At Assumption Onboarding - Mortality

Challenges in mortality assumption setting are mitigated by block-specific data

Data

- Usually have good amount of data for base mortality
- Data tend to be at the aggregate level
- Consultant appraisal

Judgment

- Certain features such as Joint Life mortality can be difficult to set
- COVID adjustment
- Mortality improvement

Integration

- Company table structure
- Consistency issues
- Regulatory guidelines