Life / LTC Linked Benefit Products
Pricing and Risk Mitigation

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Agenda

- Product Overview
  - Product Options and Benefits
  - How Do the Products Work and What do They Cover?
  - Why are These Products Gaining Traction in the Market?
  - Recent Sales Figures

- Key Assumptions
  - Mortality
  - Morbidity
  - Lapse

- Pricing Techniques
  - Active and Disabled Population
  - Expected Benefits
  - Policy Dynamics
  - Profit Implications
Product Overview
Product Options and Benefits
LTC/Life Linked Benefit Products

► Provides integrated Death Benefit and Cash Value protection covering chronically ill individuals
  ▪ Typically a standard LTC 2/6 ADL Definition)

► Structured to pay benefits beyond the acceleration of the Life Insurance policy Death Benefit through a linked Extension of Benefit (“EOB”) rider for qualifying LTC claims
  ▪ Reimbursement Dollar-for-Dollar Face Reduction Approach
  ▪ Indemnity Dollar-for-Dollar Face Reduction Approach

► Mix of Life Insurance (acceleration component) and Individual LTC (EOB component)
  ▪ Governed by Section 7702B and the LTC Model Act

► Marketed as an Alternative to Stand-Alone LTC
Product Options and Benefits
LTC/Life Linked Benefit Products

▶ Product Rider Options

- Face Amount Acceleration Rider
  - 2 or 3 year acceleration period

- Extension of Benefits Rider
  - Generally 2 to 5 years

- Inflation Protection Rider
  - 3% and 5% Simple
  - 3% and 5% Compound
  - The 5% Compound Option must be offered under LTC regulations

- Return of Premium Rider/Feature
Why are These Products Gaining Traction in the Market?
Client Need – Review of Long Term Care Costs

### Nursing Home (NH), Assisted Living Facilities (ALF), Home Health Providers (HHP)

<table>
<thead>
<tr>
<th>Area</th>
<th>Private Daily Rate (NH)</th>
<th>Semi-Private Daily Rate (NH)</th>
<th>1 Bedroom Monthly Rate (ALF)</th>
<th>2 Bedroom Monthly Rate (ALF)</th>
<th>Studio Monthly (ALF)</th>
<th>HHA Hourly Rate (HHP)</th>
<th>RN Hourly Rate (HHP)</th>
<th>LPN Hourly Rate (HHP)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2012 National Averages</td>
<td>$262</td>
<td>$229</td>
<td>$3,694</td>
<td>$3,400</td>
<td>$3,435</td>
<td>$19</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>2013 National Averages</td>
<td>$262</td>
<td>$228</td>
<td>$3,512</td>
<td>$4,474</td>
<td>$3,572</td>
<td>$22</td>
<td>$66</td>
<td>$51</td>
</tr>
<tr>
<td>% Change ('12 to '13)</td>
<td>0%</td>
<td>0%</td>
<td>-5%</td>
<td>25%</td>
<td>4%</td>
<td>14%</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>2013 Annual Costs</td>
<td>$95,706</td>
<td>$83,114</td>
<td>$49,669</td>
<td>$53,691</td>
<td>$42,864</td>
<td>$17,248</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

**Key Statistics**
- The median age of Nursing Home residents is 82.7 years old; 66% are Female
- Nearly half (46%) of Nursing Home residents die within 28 months of admission
- The average length of time since admission for Nursing Home residents is 27.5 months
- The median age for Assisted Living residents is 86.9 years old
- The median length of stay for Assisted Living Residents is 25.6 months
- 79% of Home Health Care Agencies provide Alzheimer’s training to their employees
- Nearly one-third (31%) of Home Health Care recipients die within 28 months of initial care
Why are These Products Gaining Traction in the Market?
Client Need – Marketing Story

► Products market away from the most common objection to stand-alone LTC products: it is a “use it or lose it” sale:

  • Provides integrated Death Benefit and Cash Value protection features
  • Typically includes a Return of Premium Feature

► Products are generally marketed to those who have decided to self-fund their LTC needs

  • If the client does not own stand-alone LTC, they ARE self-funding

► Products can help client leverage the assets they are allocating to LTC protection need

  • Linked Benefit Rider** Average Premium: $81,134
    Average Face Amount : $145,387
    Potential Additional EOB Coverage : $290,774
    Total Potential Coverage : $436,161 (~5.4x Leverage)
    Provides benefits over a minimum 6-year period

Source : LIMRA Individual Life Combination Products – 2013 Annual Review
** - Linked Benefit Averages based on Single Premium Products
Why are These Products Gaining Traction in the Market?
Client Need – LTCI Leverage

Monthly LTC Benefit: $6,058
Total Leverage: 5.4x

Leverage impact
For LTC combo products

$145,387
Total Accelerated LTCI Benefit or Tax-Free Face Amount

$72,694
Year 1

$72,694
Year 2

$72,694
Year 3

$290,774
(2x Face Amount)
Total 4 Years

$72,694
Year 4

$72,694
Year 5

$72,694
Year 6

$81,134
Premium
Why are These Products Gaining Traction in the Market?

Product Risk Profile

► Life / LTC Linked Benefit Products are not “Stand-alone LTC”
  • Combination of mortality and morbidity risks result in a natural hedge providing a degree of embedded risk management versus stand-alone LTC
  • The Extension Rider is the equivalent of a limited benefit LTC policy with a 2 or 3 year elimination period
    - Maximum benefit period is typically 6-7 years
    - Acceleration Rider must be exhausted before Extension Rider is used
    - This product is not available in the stand-alone LTC market and is more efficient given the “effective” elimination period

► Products have lower expected claims incidence
  • Policyholder must decide to use their own money first for the first 2 to 3 years of claims via the Acceleration Rider
  • Expected to result in lower LTC claims costs to insurance company
Recent Success
2013 Sales Results

- Total Premium: $2.6B
  - 8% growth over 2012
  - Represents 13% of Total Individual Life Premium
  - ~98,000 Policies Issued (14% growth)

- Average Premium
  - Single Pay: Increased by 14% to $81,134
    Average Face - $145,387
  - Recurring Premium: Increased by 34% to $8,849
    Average Face - $342,555

- Product Mix
  - Acceleration Products Grew by 18%
  - Extension (Linked Benefit) Products Grew by 14%
  - 24% Extension Products / 76% Acceleration Products
  - Universal Life is Dominating (79% of policies sold)

- General Movement Towards Flexible Payment Products

Sources: LIMRA Individual Life Combination Products – 2013 Annual Review
Key Pricing Assumptions
Major Assumptions

Three Major Assumptions Need to be Considered:

- Mortality
- Morbidity
- Lapse

Each Plays a Critical Role in the Development of Expected Claims

Considerations for Each Assumption:

- Underwriting
- Product Design and Marketing
- Policy Size
- Overlap with Other Products
- Target Market
Major Assumptions
Assumption Profiles

▶ Mortality Profile
  • Total Population Mortality
  • Active Life Mortality
  • Disabled Life Mortality

▶ Morbidity Profile
  • Incidence Rates
  • Termination Rates
  • Underwriting Selection Factors
  • Salvage factors

▶ Lapse Profile
  • Due to Interplay Between Mortality and Morbidity Assumptions, Lapse is a Key Factor
Key Questions to Ask
Key Questions to Ask

Mortality Assumption

► Underwriting
  • Are there additional underwriting requirements (cognitive testing, prescription drug checks, motor vehicle reports, etc.) and questions on the application due to the addition of the rider?
  • What impact does this have on the mortality profile of the base product?
  • Do the maximum issue ages of the product change?
  • What is the source of the Disabled Life Mortality table? Is it aligned properly with the business being sold?
  • How will the Active Life Mortality assumption be developed?

► Product Design and Marketing
  • Does the addition of the rider change the expected level of anti-selection in the product?
  • Are the lapse rates expected to change with the addition of the rider impacting mortality deterioration?
  • Is there a new simplified sales process? Will this attract more unhealthy lives?
  • Does the addition of the rider encourage more short-pay, asset accumulation sales?
Key Questions to Ask
Mortality Assumption

► Policy Size
  • Does the addition of the rider change the expected distribution of business by band?
  • What is the maximum face amount policy that the rider will be added to? How does this change the overall mortality profile?

► Overlap with Other Products
  • What products will the rider be added to?
  • Does this determination drive certain segments of population to alternative products adjusting the risk profile of multiple products in the portfolio?
  • Can the rider be added after issue? What impact would that have on the base product mortality profile?

► Target Market
  • Will the addition of the rider attract a different population to the base product (i.e. Sex, Socio-Economic, etc.)? What impact does this have on the mortality profile of the base product?
Key Questions to Ask

Morbidity Assumption

► Underwriting
  • What information will be gathered in the rider underwriting (i.e. Tele-Underwriting, Medical Information, Bureau Screen, Prescription Drug Screen, Motor Vehicle Report, Cognitive Testing, APS Reports, etc.)?
  • Has a “Field Underwriting” guide been established with a series of knock-out questions for the rider?
  • How long is the expected LTC underwriting selection period?
  • How will underwriting selection factors be developed (i.e. Age, Sex, Policy Duration, Band, Class, Marital Status, etc.)?
  • What is the maximum sub-standard table that will be issued?

► Policy Size
  • What is the maximum face amount the rider will be added to?
  • What is the maximum amount per month that can be accelerated?
  • Are the rider maximums in-line with HIPAA limits?
  • Can acceleration amounts exceed the HIPAA limit?
Key Questions to Ask
Morbidity Assumption

► Product Design and Marketing
  • Does the rider provide reimbursement or indemnity benefits?
  • What are the benefit triggers?
  • Over what period of time does the rider accelerate benefits?
  • What is the elimination period for the benefits? Is it the same for all eligible benefits?
  • Is the product tax qualified?
  • Will a licensed health care practitioner certify benefit eligibility?
  • What will be the criteria for establishing eligibility requirements for any international coverages?
  • For reimbursement benefits, what is the appropriate amount of salvage to factor in?
  • Who will be handling claims processing?
Key Questions to Ask
Lapse Assumption

► Product Design and Marketing
  • Does the addition of the rider change the expected lapse rates of the base product?
  • Will there be any expected lapses for policies “on-claim”?
  • Are there any “return of premium” features included in the design that will impact lapse rates?
Key Questions to Ask

- Assumption Development is More Complicated than a Typical Life Product

- Developing an Understanding of the Interplay Between the Assumptions is Critical
  - What Combination of Assumptions Produces “Poor” Results?
  - What Combination of Assumptions Produces “Good” Results?
Pricing Techniques
Pricing Techniques
Active and Disabled Populations

- Over time, the disabled population makes up a significant portion of the total population, shifting ultimate mortality benefits from the base policy to acceleration morbidity benefits of the rider.
Pricing Techniques
Expected Benefits

- Total benefits paid over the lifetime of the policy will not change, but the characterization and the timing of the benefits will be different.

- For a sample UL product, more than 25% of the total benefits paid will shift from mortality benefits to acceleration benefits by the addition of the rider.

- On a present value basis, the shifting of benefits forward has a pronounced impact (+18.8%).

Sample UL Product with $100,000 face amount and premiums to fund positive cash value at age 100. Chronic Illness Acceleration Rider pays $1/24th of the Face Amount each month over a 24 month period. Policy Death Benefit equals Face Amount in all Durations.
As the face amount of the policy is accelerated, a reduction to the policy account value will also be required.

For example, if the monthly claim amount for the sample policy is $4,167, there will be changes that occur to the policy’s Face Amount, Account Value and Net Amount at Risk.

<table>
<thead>
<tr>
<th>Insurance Component</th>
<th>Pre-Claim</th>
<th>Post Claim</th>
<th>Change Due to Claim Payment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Claim Amount(t)</td>
<td></td>
<td>$4,167</td>
<td></td>
</tr>
<tr>
<td>Face Amount(t)</td>
<td>$100,000</td>
<td>$95,833</td>
<td>$4,167</td>
</tr>
<tr>
<td>Account Value(t)</td>
<td>$13,959</td>
<td>$13,377</td>
<td>$582</td>
</tr>
<tr>
<td>Net Amount at Risk(t)</td>
<td>$86,041</td>
<td>$82,456</td>
<td>$3,585</td>
</tr>
<tr>
<td>Claim Amount Paid from Net Amount at Risk(t)</td>
<td></td>
<td></td>
<td>$3,585</td>
</tr>
<tr>
<td>Claim Amount Paid from Account Value Reduction(t)</td>
<td></td>
<td></td>
<td>$582</td>
</tr>
</tbody>
</table>
Due to the acceleration claim activity, there is a significant difference in the inforce face amount in the model population remaining after 20 years.

The combination of adjustments to the policy face amount and account value from the acceleration claims also impacts the policy’s net amount at risk.

By the end of duration 20, there is an 8% reduction in net amount at risk growing to 43% by the end of duration 30 when compared to the base policy without the rider.
<table>
<thead>
<tr>
<th></th>
<th>Total Benefit Payments</th>
<th>Claim Amounts Paid from Net Amount at Risk</th>
<th>Insurance Charges Collected*</th>
<th>Insurance Profit</th>
<th>Insurance Margin</th>
<th>Benefit to Insurance Charge Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>Base Policy Only</td>
<td>$10,863</td>
<td>$7,535</td>
<td>$8,665</td>
<td>$1,130</td>
<td>+13.0%</td>
<td>87.0%</td>
</tr>
<tr>
<td>Base Policy and Acceleration Rider</td>
<td>$12,910</td>
<td>$9,179</td>
<td>$7,979</td>
<td>-$1,200</td>
<td>-15.0%</td>
<td>115.0%</td>
</tr>
<tr>
<td>Difference ($)</td>
<td>+$2,047</td>
<td>+$1,664</td>
<td>-$686</td>
<td>-$2,330</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Difference (%)</td>
<td>+18.8%</td>
<td>+21.8%</td>
<td>-7.9%</td>
<td>-206.2%</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Changes to the universal life policy net amount at risk from the acceleration claim payments are what will ultimately drive the changes to profitability.
The combination of the increase in benefit payments from the earlier acceleration payments and the reduction in insurance charges due to the lower inforce amounts of net amount risk causes a significant reduction in the overall profitability level of the policy.

When the acceleration rider is attached to the policy, there may be a mismatch between the current cost of insurance charges and the level and new shape of benefits.
Pricing Techniques
Impact to Profitability

- An additional $2,572 (32.2%) of insurance charges would be required to restore the profitability.

- The increase of 32.2% over the base policy is significantly more than the 18.8% increase in the total benefit payments.

- Simply increasing the insurance charges by the percentage increase in the total benefits will not be sufficient to offset the cost of the acceleration due to the reduction in net amount at risk over time.

Sample UL Product with $100,000 face amount and premiums to fund positive cash value at age 100. Chronic Illness Acceleration Rider pays 1/24th of the Face Amount each month over a 24 month period. Policy Death Benefit equals Face Amount in all Durations.
Conclusions
Conclusions
LTCI Linked Benefit Products Have Been Successful

- LTCI Linked Benefit Products offer a unique way for insurance companies to differentiate themselves in today’s market.

- Products fill a distinct client need as baby-boomers continue to age and lack long-term care coverage.

- Products provide a multi-faceted solution in comparison to the stand-alone LTC market which has been declining sharply.

- The major risks underlying the products can be mitigated by solid policy/product design, underwriting, claims management processes, and newly designed reinsurance structures.

- Assumption Development is “Non-Trivial”; Spend Time Asking Questions.

- These products can help an insurance company significantly grow the top and bottom lines while effectively managing their overall risk profile.
Middle Market and Simplified Issue

Sean Conrad, FSA, MAAA, FIA, CFA
Vice President - Pricing Actuary
Recent Updates & Developments

- Balancing price and process
- Simplified issue mortality experience
- Predictive modeling and streamlined underwriting
Holy grail = streamlined/nonmed underwriting process with premiums equivalent to fully underwritten product

Benefits of a quicker, simpler, and non-invasive new business & underwriting process
- Better experience for customer & distribution
- Higher placement rates
- Potentially lower expenses

Unfortunately, emerging SI mortality is significantly higher than for fully underwritten business…

…but new data and risk selection tools may help close the gap
Mortality experience - SI vs. Full Underwriting

SI mortality experience is significantly higher than for full underwriting (FUW)

- Major difference for SI protection vs. accumulation products
  - SI protection products 2-4x higher mortality than FUW
  - SI accumulation products 50-100% higher mortality than FUW

- Differential of SI vs. FUW mortality reduces over time, but still 3-5 tables for protection products over a pricing horizon
Mortality experience – GI COLI vs. Full Underwriting

…but mortality for GI COLI is lower than fully underwritten traditional business.
So what’s different?

Comparing individual SI business to GI COLI

- Anti-selection at issue and post issue
- Smoking & other non-disclosure (incentive to lie)
- Socioeconomics (middle market vs. white collar executives)
  - differences in smoker prevalence, access to healthcare, obesity, etc
- Difficulty attracting/keeping healthy lives
Not many would argue that a streamlined UW process is going to open up the possibility for increased anti-selection and/or that some impaired lives will slip through.

But it doesn’t take much extra mortality to significantly increase experience on a % basis, especially for younger ages & early durations.

The table below shows the impact that 1 additional death per 1000 has on the PV of mortality over 1, 5, and 30 years.

<table>
<thead>
<tr>
<th>Impact of 1 Additional Death</th>
</tr>
</thead>
<tbody>
<tr>
<td>IA</td>
</tr>
<tr>
<td>----</td>
</tr>
<tr>
<td>25</td>
</tr>
<tr>
<td>35</td>
</tr>
<tr>
<td>45</td>
</tr>
<tr>
<td>55</td>
</tr>
<tr>
<td>65</td>
</tr>
</tbody>
</table>
Predictive modeling can provide significant benefit to risk selection and stratification in the middle market

Potential uses for predictive modeling:

- Source of information to help triage “good risks” through the system (streamlined UW)
- Use predictive analytics to help determine preferred risks in “non-med/SI” products
- Post-issue monitoring/benchmarking
Predictive Modeling: Hannover Re/LexisNexis

Model Validation

- LexisNexis (LN) has developed a predictive model that uses FCRA data to estimate relative mortality risk
  - Model produces a score from 200-999 with low scores=higher mortality
- LN provided data so that we could validate the results of their model

Dataset

- Includes over 4.5 million records representing ‘insurance shoppers’
  - LN appended FCRA data and calculated a mortality score for each record
- Initial records October 2006 followed through first half of 2013
  - More than 140,000 deaths
- Mortality analyzed relative to US population mortality, then adjusted to baseline referent to reflect relative risk
- Key attributes of model include:
  - Public records (criminal findings, derogatories, court filings, etc.)
  - Lifestyle (professional licenses, motor vehicle record*, FAA certifications, watercraft, etc.)
  - Socio-economic (credit, property ownership, wealth index, bankruptcies, etc.)

*motor vehicle records not included in sample population reviewed
The high level results of the analysis on the predictive model score were as expected…higher scores $\rightarrow$ lower mortality.

But we also wanted to understand those relationships at a more granular level to feel comfortable that the model wouldn’t “break down.”

### Predictive Modeling: Hannover Re/LexisNexis

#### Total Model Results

<table>
<thead>
<tr>
<th>Exposure Years</th>
<th>% of exposure</th>
<th>Observed Deaths</th>
<th>Relative Mortality</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grand Total</td>
<td>22,955,453</td>
<td>100.0%</td>
<td>140,585</td>
</tr>
</tbody>
</table>

#### Predictive Model Score

<table>
<thead>
<tr>
<th>Score Range</th>
<th>Exposure Years</th>
<th>% of exposure</th>
<th>Observed Deaths</th>
<th>Relative Mortality</th>
</tr>
</thead>
<tbody>
<tr>
<td>200-299</td>
<td>2,060,220</td>
<td>9.0%</td>
<td>15,532</td>
<td>199%</td>
</tr>
<tr>
<td>300-399</td>
<td>2,150,535</td>
<td>9.4%</td>
<td>15,347</td>
<td>147%</td>
</tr>
<tr>
<td>400-499</td>
<td>3,308,535</td>
<td>14.4%</td>
<td>28,285</td>
<td>118%</td>
</tr>
<tr>
<td>500-599</td>
<td>4,559,388</td>
<td>19.9%</td>
<td>38,088</td>
<td>98%</td>
</tr>
<tr>
<td>600-699</td>
<td>4,768,445</td>
<td>20.8%</td>
<td>27,725</td>
<td>81%</td>
</tr>
<tr>
<td>700-799</td>
<td>3,550,238</td>
<td>15.5%</td>
<td>11,892</td>
<td>66%</td>
</tr>
<tr>
<td>800-899</td>
<td>1,847,540</td>
<td>8.0%</td>
<td>3,099</td>
<td>52%</td>
</tr>
<tr>
<td>900-999</td>
<td>710,551</td>
<td>3.1%</td>
<td>617</td>
<td>43%</td>
</tr>
</tbody>
</table>
Predictive Modeling: Hannover Re/LexisNexis
By Wealth Level

For example, we know that mortality and wealth tend to be inversely correlated

**Higher Wealth = Lower Mortality**

But wealth is also correlated with smoker prevalence, obesity, etc…

…so we wanted to be able to see that the predictive model score “worked” even when controlling for wealth

<table>
<thead>
<tr>
<th>Wealth Index</th>
<th>Exposure Years</th>
<th>% of exposure</th>
<th>Observed Deaths</th>
<th>Relative Mortality</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>420,505</td>
<td>1.8%</td>
<td>2,291</td>
<td>151%</td>
</tr>
<tr>
<td>2</td>
<td>1,279,506</td>
<td>5.6%</td>
<td>11,664</td>
<td>126%</td>
</tr>
<tr>
<td>3</td>
<td>3,503,437</td>
<td>15.3%</td>
<td>22,398</td>
<td>109%</td>
</tr>
<tr>
<td>4</td>
<td>3,867,085</td>
<td>16.8%</td>
<td>22,032</td>
<td>90%</td>
</tr>
<tr>
<td>5</td>
<td>2,755,533</td>
<td>12.0%</td>
<td>13,753</td>
<td>74%</td>
</tr>
<tr>
<td>6</td>
<td>684,466</td>
<td>3.0%</td>
<td>3,095</td>
<td>62%</td>
</tr>
<tr>
<td>Unknown</td>
<td>10,444,922</td>
<td>45.5%</td>
<td>65,352</td>
<td>107%</td>
</tr>
</tbody>
</table>
The predictive model score shows a strong relationship with mortality, even when holding wealth constant.

![Mortality by Predictive Model Score & Wealth Index](image-url)
The shape of the curve is consistent by age group and gender, suggesting it does not break down at this level of granularity.
Summary

- Struggle to balance price and process for SI/streamlined UW products
- Emerging mortality experience for SI products significantly higher than for fully underwritten business
- New data and risk selection tools (such as predictive modeling) could play an important role in closing the gap
Questions?
Financial Reinsurance

Jason Rickard, FSA, MAAA
Vice President, Financial Solutions
Hannover Life Reassurance Company of America
FINANCIAL REINSURANCE

Agenda

1. What is Financial Reinsurance – A Primer and then a First Coat
2. Key Considerations in Financial Reinsurance Transactions
3. Use of Captives in Financial Reinsurance Transactions
Traditional Uses of Reinsurance

► Traditional Risk Management
  • Stop Loss, Facultative Reinsurance, Treaty (automatic) Reinsurance

► Entering New Markets/Access to Expertise
  • Changes in underwriting / preferred criteria, uses of alternative forms of underwriting, older age, life/LTC
  • Could be fronting/licensing motivations

► Competitive Pricing
  • Reinsurer may have cost advantages, larger/more diversified block, more experience
  • Income or Tax Management

► Financing
  • Funding new business costs, capital financing, divestitures of blocks, etc.
Various Forms of Reinsurance
Soup to Nuts…

The most basic form is Coinsurance

- Simple, straightforward, and effective for both new business and inforce transactions
- Primary disadvantage is the requirement to transfer assets
- Also concerns related to counterparty / insolvency risk given assets needed to pay future claims are held within the reinsurer’s general account

Modified Coinsurance and Funds Withheld

- Structures address some of the disadvantages of pure coinsurance, including not needing to liquidate and transfer assets.
- Also allows a way to handle reserve credit issues when a reinsurer is not otherwise licensed or authorized.
- Creates a need to negotiate investment guidelines.
- Also creates additional B-36 derivative accounting issues that generate volatility to GAAP statements
What is Financial Reinsurance?

May be easier to define it as what it is not

- It isn’t a loan, although it is often thought of as such...
- And it’s not just captive reserve financing transactions

If properly constructed, it will obtain appropriate accounting treatment to the extent that the reinsurer can only recover its capital or investment under the agreement from future profits of the reinsured block… to the extent that they ultimately emerge.

At the same time, the primary motivation is generally not to transfer first dollar risk

- Allows for companies to manage their capital and earnings patterns by passing strain to a reinsurer in exchange for a fee.
Expanded Use Of Reinsurance in the Market
Leveraging the Core Competencies of Reinsurance Solutions

Reinsurance Core Competencies:
- Product knowledge
- Data aggregator
- Broad client relationships
- Financial Strength
- Well-established admin
- Regulator preferred

Coinsurance

YRT
Expanded Use Of Reinsurance in the Market
Leveraging the Core Competencies of Reinsurance Solutions

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- Product knowledge
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- Financial Strength
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Surplus Relief
“Securities Lending Wrappers”
YRT

Coinsurance

Redundant Reserve Structured Reinsurance Transactions

New Business Financing and Embedded Value Transactions

Securities Lending Wrappers

YRT

Redundant Reserve Structured Reinsurance Transactions

New Business Financing and Embedded Value Transactions

Securities Lending Wrappers

YRT

Redundant Reserve Structured Reinsurance Transactions

New Business Financing and Embedded Value Transactions

Securities Lending Wrappers

YRT

Redundant Reserve Structured Reinsurance Transactions

New Business Financing and Embedded Value Transactions
Motivations for Financial Reinsurance

- Improve the level and timing of earnings
- Mitigate impact of accounting standards and regulations that can distort the economic results of life insurance businesses
- Transfer excess regulatory capital requirements
- Provide funds or shrink the target in an acquisition OR divestiture
- Improve ratios and metrics important to regulators and rating agencies
- Improve Cost of Capital, ROA, IRR, ROE, …
- Optimize tax efficiency
- Demonstrate value to the market or segregate results
- Cash financing of New Business
ROE Optimization
A measure of value to shareholders

- Most companies focus on ROE on some level
- Companies cannot grow earnings faster than their current ROE without raising cash or using reinsurance
- Average RBC ratio in the life insurance industry

<table>
<thead>
<tr>
<th>US Life Insurance Companies - RBC Ratio Distribution</th>
</tr>
</thead>
<tbody>
<tr>
<td>RBC Ratio</td>
</tr>
<tr>
<td>&gt; 10000%</td>
</tr>
<tr>
<td>1000% - 9999%</td>
</tr>
<tr>
<td>500% - 999%</td>
</tr>
<tr>
<td>250% - 499%</td>
</tr>
<tr>
<td>200% - 249%</td>
</tr>
<tr>
<td>&lt;200%</td>
</tr>
</tbody>
</table>

For many companies, the issue is less with a need to reduce capital and more with a need to efficiently fund capital.
Asset Subordination View
Liabilities have varying costs

- Cost
+ 

ASSETS

- Capital
- Liability PADs
- Economic Reserves
Financial Solutions Landscape
A Variety of Ways for Companies to Manage Their Capital

Cost / Payback Security

Debt
- Debt Issuance
- Bank Loan
- Surplus Note

Equity
- Coinsurance
- Mortality / Morbidity / Investment Income
- Hedge- RBC Relief
- XXX / AXXX Securitization
- Monetization
- Equity Issuance
The Changing Landscape of Risk Taking
An Alternative View of Reinsurance

**Traditional Reinsurance**
- Reduces liabilities
- Transfers risk
- Non-recourse
- Limited tax flexibility

**Insurance “Lending”**
- Increases assets
- Funds Liabilities
- Typically has some recourse
- Ability to retain and consolidate primary tax benefits
Key Considerations Financial Reinsurance Transactions
Accounting Considerations
Statutory Risk Transfer Requirements

 Governed under Statutory Accounting Principle no. 61 and Appendix A-791

• A-791 does not apply to YRT or stop loss / catastrophe reinsurance

Key Requirements:

• Must provide renewal expense allowances adequate to cover anticipated allcable expenses of the ceding insurer on the portion of business reinsured.
• Cannot deprive the ceding insurer of surplus at the reinsurer’s option
• Cannot force recapture of the agreement
• Cannot require payment of amounts other than from income realized from the reinsured policies.
• Agreement must transfer all significant risks inherent in the business reinsured.
• Ceding reinsurer cannot be required to may reps or warranties that are not reasonably related to the business being reinsured or the future performance.
• Agreement cannot be entered into for the primary purpose of surplus relief while not transferring all risks.
Financial and Operating Leverage
Levers of Growth for Insurance Companies

► Ways for life insurance companies to raise funds to grow:
  • Issuing Senior Debt out of the holding cop
  • Divestitures of capital intensive blocks
  • Surplus Notes
  • Various reinsurance structures

► Total Leverage = Operating Leverage + Financial Leverage

  • Financial Leverage → Generically defined as the ratio of a companies Debt to their Statutory Surplus

  • Different instruments get different treatment
    - I.e., rating agencies have modified their view of surplus notes and they may not be treated as pure equity depending on features:
      • Length to Maturity
      • How subordinate claims are to policyholders and other creditors
      • Need for regulatory approval of interest payments and principal repayments
Cost of Funds Matrix
Recourse and Funding Level Drivers

+ Funding Level -

“+” Recourse

“-” Recourse

Funded / Recourse

Unfunded / Non-recourse

Funded / Non-recourse

Unfunded / Recourse

TO FUND OR NOT TO FUND... THAT IS THE QUESTION
Advantages and Disadvantages
In Deploying Financial Reinsurance Strategies

Advantages:

• May be lower cost than borrowing and almost always cheaper than raising equity
• Allows companies to monetize their expected future profits or borrow against the expected future profits without recourse
• Fewer covenants than debt and doesn’t dilute equity-holders
• Rating Agency friendly

Disadvantages:

• May be more expensive than debt after-tax
• Adds some complexity to financial statements and administration
• May need to explain to rating agencies and regulators
• May introduce tax inefficiencies
Use of Captives in Financial Reinsurance Transactions
US Traditional Life Reinsurance Market
Cession Rates During the Past Two Decades
**Life Insurance Financing Landscape**
A General Timeline of the Past 15 Years

**Recent Evolution Capital Financing**

**2000 – 2005**
Virtually all life financing done via coinsurance

**2005-2007**
More direct companies begin to use captives to fund XXX reserves within the capital markets via securitizations

**2008**
Financial crisis dries up liquidity and blows out credit spreads; funded structures become very difficult to execute

**2009-2010**
Regulators open to alternative financing solutions in the wake of the financial crisis. Banks offer conditional LOC solutions to direct writers but need to hedge the risk due to limitations on their balance sheets.

**2011-2014**
Increased use of captive structures and varying forms involving unfunded structures such as reinsurance backed notes

**Going Forward**
Rector Report and AG48 will provide additional guidance around the use of captives and alternative forms of capital financing, which will likely be needed even after PBR
Companies generally doing several of the following:

- Captive Solutions
  - Credit and Non-recourse Solutions
  - Internal or third party risk transfer
- Permanently Financing with Debt and Equity Capital
- Temporarily Warehoused for Takeout
- Coinsuring the Business with Commercial Reinsurers

Many Companies See Value in Diversifying Their Sources of Capital
Captives: Why so many questions?
Captives: Why so many questions?
Captives: Why so many questions?

- LLC/Trust
- Captive Reinsurance Company
- Ceding Company
- 3rd Party Reinsurance
- Capital Infusion
- Coinsurance
- Reinsurance

SN ↔ CLN
Captives: That’s why so many questions!

**LEGEND:**
- **Swap:** Derivative Contract
- **SN:** Surplus Note issuance to LLC/Trust
- **CLN:** Credit-Linked Note issuance from LLC/Trust
- **RA:** Reimbursement Agreement (optional)
- **NWMA:** Net-Worth Maintenance Agreement (optional)
- **Coinsurance:** Coinsurance Funds Withheld
- **Reinsurance Agreement**
- **Reinsurance:** YRT Agreements with 3rd Party Reinsurers (if applicable)

![Diagram of Captive Reinsurance structure]

- **LLC/Trust**
  - Swap to **Hannover**
  - **SN** to **Captive Reinsurance Company**
  - **CLN** to **Captive Reinsurance Company**

- **Captive Reinsurance Company**
  - **Coinsurance** to **Ceding Company**
  - **Capital Infusion** to **Ceding Company**

- **Ceding Company**
  - **Reinsurance** to **3rd Party Reinsurance**

- **3rd Party Reinsurance**

- **Hannover**
  - **RA (optional)**
  - **NWMA (optional)**
Captives: A Simplified View of Alternate Capital Solutions

LEGEND:
- Swap: Derivative Contract
- SN: Surplus Note issuance to LLC/Trust
- CLN: Credit-Linked Note issuance from LLC/Trust
- RA: Reimbursement Agreement (optional)
- NWMA: Net-Worth Maintenance Agreement (optional)
- Coinsurance: Coinsurance Funds Withheld
- Reinsurance Agreement
- Reinsurance: YRT Agreements with 3rd Party Reinsurers (if applicable)
- Captive Reinsurance Company
- Ceding Company
- 3rd Party Reinsurance LLC/Trust
- Hannover Ceding Co.
- Parent
- Capital Infusion
- NWMA (optional)

CONSIDERATIONS:
- Single issuer limitations of supporting asset
- Inclusion of new business
- Tax sharing arrangements with the parent
- Length of the notes
- Limitations on Dividends
- Amount of Capital Infusion
- Form D filings and other filings with regulators
- Ratings of notes
- Etc….
NAIC Captives and SPVs White Paper

Background

▸ Who?
  • Financial Condition (E) Committee of NAIC
  • Captive and Special Purpose Vehicle Use (E) Subgroup

▸ What?
  • Description of current situation
  • Analysis of relevant issues
  • Recommendations

▸ Why?
  • Context: Broadened and widespread use of captives to fund redundant reserves
  • Concern: Emergence of a “shadow insurance industry”
Seeking Business, States Loosen Insurance Rules

By MARY WILLIAMS WALSH and LOUISE STORY
Published: May 8, 2011

Companies looking to do business in secret once had to travel to places like the Cayman Islands or Bermuda.

Today, all it takes is a trip to Vermont.

Vermont, and a handful of other states including Utah, South Carolina, Delaware and Hawaii, are aggressively remaking themselves as destinations of choice for the kind of complex private insurance transactions once done almost exclusively offshore.

Roughly 30 states have passed some type of law to allow companies to set up special insurance subsidiaries called captives, which can conduct Bermuda-style financial wizardry right in a policyholder's own backyard.

Captives provide insurance to their parent companies, and the term originally referred to subsidiaries set up by any large company to insure the company's own risks. Oil companies, for example, used them for years to guard for environmental claims related to infrequent but potentially high-cost events. They did so in overseas locations that offered light regulation amid little concern since the parent company was the only one at risk.
Experts Fear Life Insurers Are Courting Reserve Risk

By MARY WILLIAMS WALSH
Published: November 29, 2012

WASHINGTON — After more than a year studying a surge of intricate financial deals in the life insurance industry, regulators said Thursday that they had found transactions that could “give the industry a black eye,” but could not agree on what to do about them.

“There are some transactions out there that we’re not comfortable with, and we’re not sure you’d be comfortable with,” Douglas Slape, chairman of the research panel, told a ballroom full of industry representatives at a conference in suburban Washington. “We can’t go into the details because it’s confidential.”

Differences among the panelists soon became apparent as the group laid out its findings. Some expressed concern that insurers were “betting the policyholders’ money,” while others argued that the transactions were carefully vetted and safe.

The National Association of Insurance Commissioners convened the research project, in part, in response to an article in The New York Times on the growing practice among life insurers of offloading huge numbers of policies into opaque, off-balance-sheet subsidiaries. The transactions, often valued in the hundreds of millions or even billions of dollars, can improve the appearance of the insurers’ balance sheets and free up money for other projects, or to pay shareholder dividends.
Lighting the Fire…

- Initial Reactions to the White Paper
  - Final version released in June, 2013
  - Concluded that most transactions studied were legitimate; stressed additional transparency

- Regulators start to realize that they are walking a fine line between uniformity of solvency oversight and pushing it towards federal oversight

- NAIC Committees – the alphabet soup of the U.S. regulatory system
  - Financial Analysis Work Group (Financial Condition (E) Committee) → performs analytical reviews of transactions submitted for approval
  - Principle-Based Reserving Implementation (EX) Task Force → established by the Executive Committee of the NAIC, they are tasked with developing recommendations for captive regulations prior to implementation of PBR
  - Captive (EX) Work Group → subgroup of the Financial Condition (E) Committee that drafted the White Paper
  - Reinsurance (E) Task Force → charged with developing a list of qualified jurisdictions for purposes of certifying reinsurers in those jurisdictions
  - Capital Adequacy (E) Task Force → considering proposals to change regulations related to collateralization of risk ceded to unauthorized reinsurers for purposes of RBC
The Rector Report - Key Developments

Initial report in September, 2013 presents the PBR Task Force with a “Threshold Decision”

- Perception of some regulators was that a race to the bottom in captives was creating an un-level playing field and possibly risk to the insurance companies
- NAIC posed question as to whether captive financing solutions continue to be allowed
- General consensus among regulators to continue to allow captives until PBR becomes effective
- Regulatory consulting firm Rector and Associates was tasked with providing a recommendation of what should be allowed in all states to create even playing field

Subsequent report in February, 2014

- What it does NOT recommend…
  1. Changing the level of required reserves
  2. Overhauling regulations related to captives
  3. Making anything dependent on the adoption of PBR
The Rector Report - Key Developments

- Framework is generally consistent with many existing our existing A/XXX financing transactions:
  - Captives must hold assets equal to the currently required XXX and AXXX reserves
  - Key information about transactions must be disclosed and approved by captive and ceding company regulatory authorities and auditors
  - A minimum level of ‘traditional’ or ‘hard’ assets should be held by the ceding company in a funds held or trust
  - Ceding company or captive are subject to holding a minimum level of surplus based on NAIC RBC requirements

- Additional key elements for the Rector Framework
  - Actuarial Method used to determine the level of traditional assets is based on PBR with a modified floor
  - Such ‘Primary’ securities would be limited to:
    1. Cash
    2. SVO-rated securities that qualify as admitted assets
       (Basically the same restrictions that are applicable to unauthorized reinsurers)
    3. Fully-compliant letters of credit (i.e. clean, unconditional, irrevocable and evergreen)
  - Allows “Other Security” to back the excess of statutory reserves over the Primary Asset
  - The transaction must be approved by both the Captive and Ceding Company regulators
  - Does not apply to certified, licensed or accredited reinsurers that materially depart from statutory accounting or fail to follow the NAIC RBC rules
Proposed NAIC Implementation Steps and Latest Modifications

**Proposed Implementation Steps:**

2. Develop the Actuarial Method that is key to the framework security requirements.
3. Develop an Actuarial Guideline to provide interim guidance for the AOMR where ceding insurer has engaged in a A/XXX reserve financing transaction that does not adhere to the Actuarial Method and Primary Security forms adopted by the NAIC.
4. Amend the NAIC Credit for Reinsurance Model Reg to allow the Commissioner to specify, by reg, any other requirements a reinsurer involved with a reserve financing transactions must meet in order for it to qualify.
5. Develop the component parts of the framework security requirements – define Primary Security, develop an RBC “cushion,” develop RBC charges for Other Security and determine whether the RBC C-3 treatment of qualified actuarial opinions is adequate for purposes of A/XXX reinsurance transactions that receive qualified actuarial opinions.
6. Develop a note to the audited financial statement regarding compliance with the new model regulation.
7. Evaluate the life reinsurance risk-transfer rules applicable to A/XXX reserve financing transactions to make sure they appropriately apply to situations such as those where parental/affiliate guarantees are used, resulting in the risk effectively being kept within the holding company system even though the reinsurance arrangement involves a cession to an unaffiliated reinsurer.
8. Finalize all disclosure requirements.

The Modified Recommendations apply only to a domestic life insurer, but it would have to be eventually promulgated by each state in order to remain NAIC accredited because it will be an accreditation standard.

Failure to satisfy the framework security requirements would result in denial of reinsurance credit (as opposed to earlier recommendations that would have required ceding company to be deemed in a hazardous financial condition).
Enforcing the New Requirements

- Actuarial Opinion and Memorandum Regulation (AOMR)
  - An annual statement requirement
  - Appointed actuary certifies that reserves are adequate in respect of assets that are being held (based on asset adequacy analysis performed)
- Interim Step: adopt an Actuarial Guideline that requires appointed actuary to certify that all steps of the Framework have been followed
- Additionally, a Note to the annual audited statement where both the Ceding Insurer and its Auditor certify that the Framework has been followed.
- Additional Disclosures on the Statutory Blank
- Financial Analysis Handbook
  - Specific procedures for states review of XXX/AXXX transactions with Captives
ACL Response to the Proposed Framework

Response to the recommendations include:

• Ensuring that any proposal be prospectively applied
• Ensuring that the proposal does not prohibit future transactions
• Are in agreement that modification to the AOMR is the best way to effect the Framework (as opposed to change reserve laws, credit for reinsurance laws, or accreditation standards)
• Tightening the definition that Rector uses for the types of transactions subject to the requirements.
• Assurance that Primary Securities (whether or not they are held in a trust) be held at book value
• Assurance that the Net Premium Reserve floor in VM-20 be removed from any Primary Security requirement
• Ensuring that there are not excessive charges to Other Securities
• Don’t think that a note to the Audited Financial Statement is necessary
Industry Implications of the Proposed Requirements

- Are any of our structured deals in jeopardy of needing to be re-structured or discontinued?
  - NAIC has all but said that any changes would not be retroactive
  - Biggest changes that likely to be retroactive would be some level of increased disclosure requirements (ORSA and Annual Statement)
  - Most if not all deals that we have would comply with the current requirements
  - Unknown of how rated note structures will be treated in terms of the Primary Security requirement
  - Captives today generally hold a level of RBC that would comply with the RBC “cushion” requirement

- Will on-shore captives be eliminated?
  - Likely not, even after adoption of PBR (when and if this ever happens…)

- Will parental/affiliate guarantees be eliminated?
  - There is a possibility of this happening – although the ACLI is pushing back on this

- Will Accreditation Standards be significantly changed?
  - Not likely, but will likely see changes related to requirements that states adopt the Framework in order to meet NAIC accreditation standards

- Industry cognizant of care used not to impact companies tax positions related to these transactions
Actuarial Guideline 48 – Latest Developments

- As currently drafted, AG 48 will apply to all policies issued after 1/1/2015
  - Regardless of the effective date of the reinsurance agreement

- Policies covered by a reinsurance agreement that have an effective date prior to 1/1/2015 but which are issued on or after 1/1/2015 will be subject to AG 48
  - Still some discussion on what happens to agreements that have material amendments after 1/1/2015 for business issued prior to that date.

- Primary Securities will not include the following:
  - Any synthetic letter of credit, contingent note, credit linked note, or other similar security that operates in a manner similar to a letter of credit.
  - Any form of Letter of Credit
  - Any security which may be SVO-rated but is not an SVO listed security which is available to be purchased by any investor.
Thanks for your attention!

Questions???
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