

Trends in Income Annuities

Actuaries Club of Greater Hartford

June 13, 2006

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Trends in Income Annuities – Agenda

- ▶ Market Overview
 - Jennifer Orzell
- ▶ Pricing & Risk Management Considerations
 - Harold Forbes
- ▶ Inflation-Indexed Income Annuities
 - Simpa Baiye

Income Annuity Market Overview

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- ▶ With longer life expectancies, people may have more years in retirement

Probability of Survival at Age 65			
To Age:	Female	Male	One Member of a Couple
80	81%	71%	94%
85	65%	53%	84%
90	44%	34%	63%
95	23%	17%	36%
100	9%	6%	14%

The chances of either you or your spouse living to age 85 is over 80%. For some people, that could mean 20 years or more in retirement.

Based on Society of Actuaries Annuity 2000 Mortality Table

- ▶ Traditional sources of retirement income may not be available:
 - **Social Security**¹
 - According to projections, Social Security trust fund assets will be depleted by the year 2041.
 - **Pensions**²
 - Companies offering pension plans are collectively underfunded by an estimated \$450 billion.
 - There were 84,884 fewer pension plans in the U.S. in 2003 than there were in 1985.

¹ Social Security Administration, 2005

² “The Really Troubled Program” Time Magazine, January 4, 2005

- ▶ Typical systematic withdrawal strategies may be insufficient
 - May not protect against longevity risk
 - Subject to market volatility
 - May not maintain standard of living

- ▶ Consumers would like help planning for income protection

▶ Variations

- Immediate vs. Deferred
- Individual vs. Group
- Fixed vs. Variable

▶ Markets:

- Single Premium Immediate Annuities
- Structured Settlements
- Maturity Funding / Terminal Funding
- Longevity
- Personal Pensions

- ▶ Sales & Assets Under Management (YE 2005)
 - SPIA (Fixed & Variable)
 - Sales: \$5.6B
 - AUM: \$46.7B
 - Structured Settlements
 - Sales: \$5.9B
 - AUM: \$70.0B+ (incomplete market data)
 - Terminal Funding / Maturity Funding
 - Sales: \$1.4B
 - AUM: \$65.0B
 - Longevity & Personal Pensions
 - Developing Markets

Source: LIMRA

- ▶ Income Types
 - Single or Joint Life
 - Period Certain
 - Life with Certain Period
 - Lump sums, Temporary Life

- ▶ Additional Features:
 - Death Benefits
 - Inflation Protection
 - Substandard Underwriting
 - Flexibility of Income Payments
 - Commutation/Withdrawals

- ▶ Differentiation among Income Annuities
 - Pricing
 - Unique Features
 - Company Ratings
 - Distribution and Service models

- ▶ Competition with Lifetime GMWBs
 - Greater advisor receptivity
 - Greater liquidity
 - Combines investment and insurance components
 - Smaller guaranteed income amount for the investment

▶ Challenges

- Market Development and Education
- Economic Environment
- Pricing Risks

▶ Opportunities

- Market Development and Education
- Develop Product Differentiation
- International Opportunities

Pricing & Risk Management Considerations

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- ▶ Immediate Annuities
 - Direct Sale SPIAs
 - Settlement Options from Other Products

- ▶ Short Term Deferrals
 - Structured Settlements
 - Terminal Funding
 - Retirement Annuities / Personal Pensions

- ▶ Longer Term Deferrals
 - Longevity Products

▶ Risk is defined as Volatility –

Any action (inherent or policyholder induced) that adds to the uncertainty of the product's expected cash flows increases the volatility of the expected outcome, and the associated risk assumed by the company.

- ▶ Investment Income
- ▶ Mortality

- ▶ Expenses
- ▶ Capital Costs

→ As the length of deferral increases, the Investment and Mortality risks tend to dominate

- ▶ Cash Flow
- ▶ Duration
- ▶ Reinvestment

- ▶ Credit Risk
- ▶ Diversification
- ▶ Tax Issues
- ▶ Financial Reporting Considerations

- ▶ Population vs. Annuitant
- ▶ Improvement Projections

- ▶ Underwriting Inaccuracies (SPIA)
- ▶ COLA Impacts
- ▶ Certain Period Impacts

- ▶ Acquisition (Issue and Commission)
- ▶ Maintenance (pre and post payment)
- ▶ Taxes, Licenses and Fees
- ▶ Other

- ▶ Driven by Company Focus
- ▶ Many Adequacy Measures
 - Internal
 - External
- ▶ Statutory vs. GAAP
- ▶ Rating Agency Considerations

- ▶ Product Features
 - Cash Refund Benefits
 - Change of Payment Options
 - Any other options granted that increase cash flow uncertainty

- ▶ Legislative Mandates (Requirements)
 - Cash Refund Benefits
 - Flexible Commencement Dates

- ▶ Risks assumed increase with length of deferral
- ▶ Some of the risks are in new territory
- ▶ The two largest risks are correlated

Inflation - Indexed Income Annuities

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- ▶ Definition
- ▶ Current Products
- ▶ Pricing and Reserving Considerations
- ▶ Carrier Investment Strategies
- ▶ Client perspective- How good is the deal?

What's an Inflation-Indexed Income Annuity?

- ▶ Income annuity with payments adjusted for periodic changes in reference inflation index
- ▶ Typical reference is non-seasonally adjusted CPI-U
- ▶ Payments are “real”
 - Adjustments typically made annually
 - Adjustments may be subject to a cap
 - Payments may decrease with deflation

- ▶ Vanguard
 - Underwritten by AIG
 - Inflation-Indexed Immediate Annuity
 - 10% cap on annual payment increase
 - Deflation will reduce payments

- ▶ Metlife
 - Inflation-Indexed Immediate Annuity
 - No cap on annual payment increase
 - Deflation will not reduce payments

- ▶ Inflation-linked annuities priced using “real” treasury curve + credit spread
 - nominal income annuities priced with nominal treasury curve+ credit spread
 - real yield \approx nominal yield – expected inflation rate

- ▶ Need “real” assets that generate “real” yield + spreads

Reserving For Real Income Annuities

▶ Statutory

- CARVM “Greatest present value of *projected* benefits”
- Will need to consider impact of inflation on future payments

▶ GAAP

- FAS 97
 - FAS 133 could apply if payout has embedded derivative

Investment Strategies for Real Annuities

▶ TIPS + Credit Derivatives

- Buy TIPS and short credit-default swaps
- Swaps are marked to market

▶ Corporate Bonds + CPI Swaps

- Pay fixed corporate coupon, receive coupon on CPI-adjusted notional
- CPI swaps are marked to market

- ▶ Major Investment Banks participate

- ▶ Plain-vanilla structures dominate
 - Few willing to quote special structures
 - Longest available term is 30 years

- ▶ Greater liquidity than TIPS
 - Bid-ask spreads still significant
 - Market dominated by fixed-payer swaps

Payout Annuity Pricing Example Inflation-Indexed

Payout Type	1st Monthly payment
Nominal	\$1,300
Inflation-Indexed	\$1,000
3% Annual Fixed Increase	\$1,010

- ▶ Real annuity payments imply CPI inflation rate of ~3%

- ▶ Low initial payment creates “sticker shock”
 - Reflects true cost of hedging inflation risk
- ▶ Initial payment comparable to fixed increase initial payment
 - Payment adjustments not guaranteed
 - Clients could question value proposition

- ▶ Inflation-indexed annuities provide explicit hedge against inflation
- ▶ Initial payment significantly less than nominal payment
 - Value needs to be clearly illustrated
 - Sticker-shock remains barrier to sales
- ▶ Payout annuities with partial inflation protection could bridge gap