OLIVER WYMAN

Longevity Insurance

November 22, 2013

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MARSH & McLENNAN COMPANIES

Objectives

What is longevity insurance?

What are the actuarial implications of the product design?

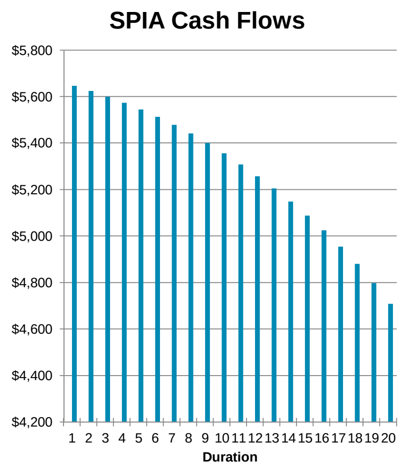
How does this product fit in the current retirement landscape?

1 | Longevity Insurance Overview

Illustrative assumptions

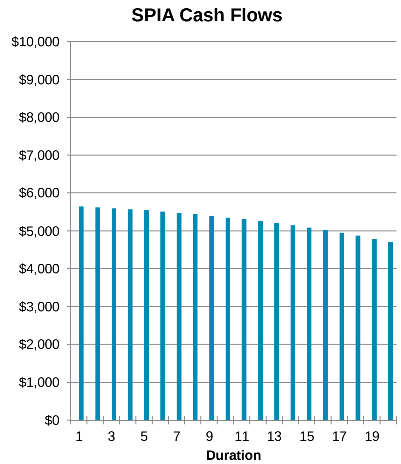
- Male, age 55
- $100,000 premium
- 2012 IAM Basic table
- Spot rates based on 11/1/2013 US Treasury Strips

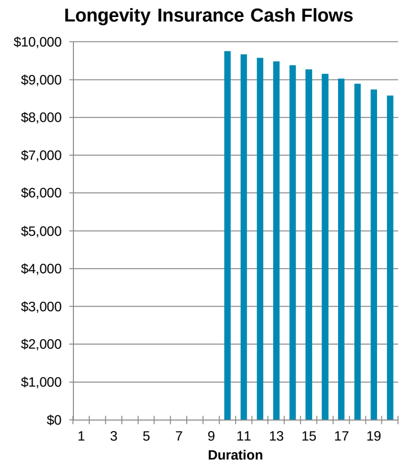
Single Premium Immediate Annuity (SPIA)



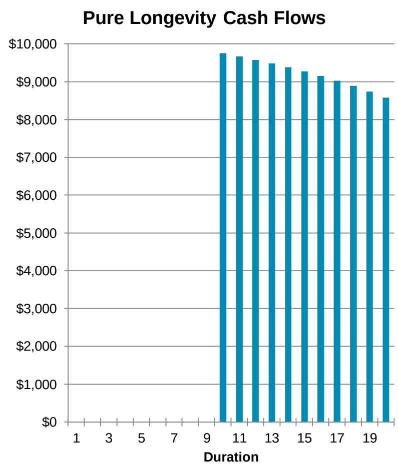
- Premium = $100,000
- Payments continue for life
- PV(Payments) = Premium
  – No expenses or commission

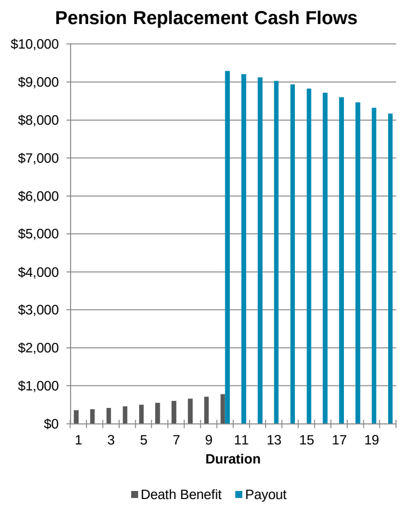
SPIA vs. Longevity Insurance
Assuming 10 year deferral period





The two forms of Longevity Insurance
Pure longevity insurance and pension replacement



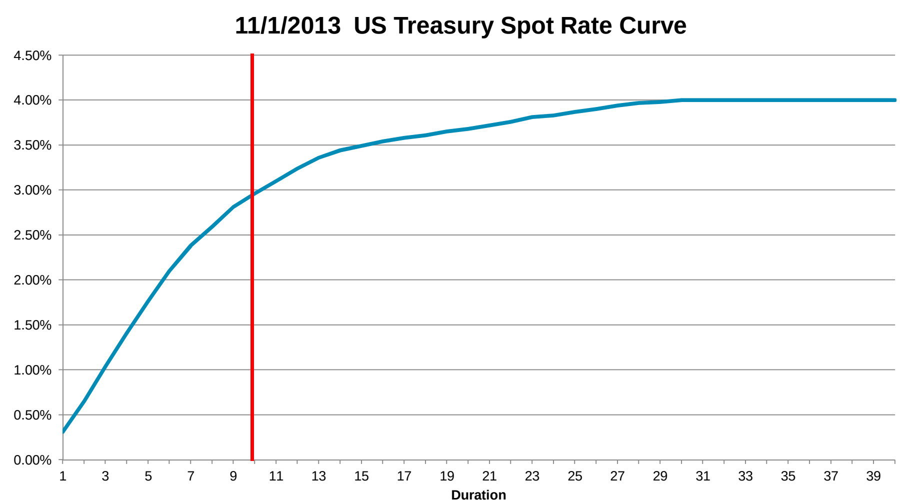


Compact filing highlights
Individual Deferred Paid-Up Non-Variable Annuity Contract Standards (Commonly marketed as longevity annuities)

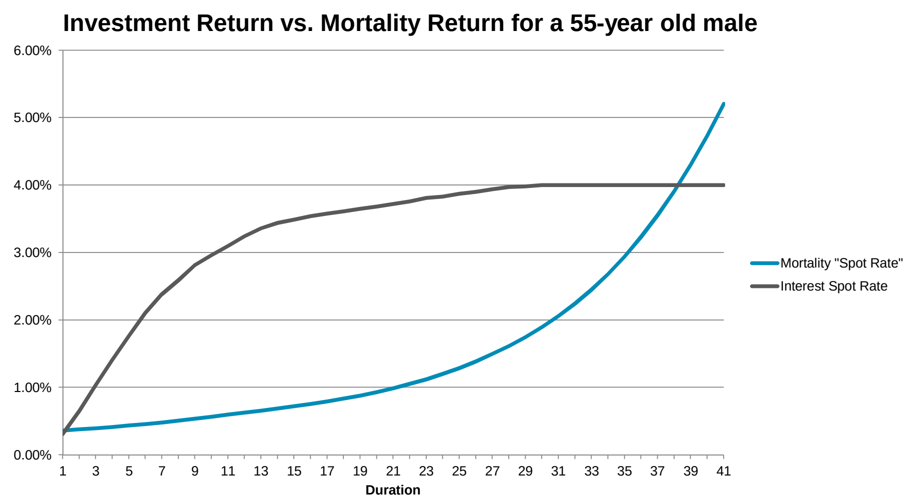
1	**Liquidity**	• No cash values or withdrawals • No commutations • Payment acceleration can be approved
2	**Flexible Premiums**	• Allowable, but not required • May place individual and lifetime limits • Income purchased is based on attained age and then current purchase rates • Can have guarantees on future purchase rates • Future premiums must be applied to same income option and commencement date
3	**Death Benefits**	• Not required • May be: percentage of premiums paid, premiums + interest, flat dollar amount, combination • Must incorporate initial and supplemental premiums
4	**Income Commencement**	• Selected at issue • May place limitations on ability to change date, or disallow entirely • Must specify charges associated with changing income date • Must show table of income benefit available at different dates, or method for determining actuarially equivalent value
5	**Income Options**	• Must contain life contingency (no period certain options) • May have certain + life options • Can allow or prohibit changes, or apply limitations

2 Actuarial Aspects

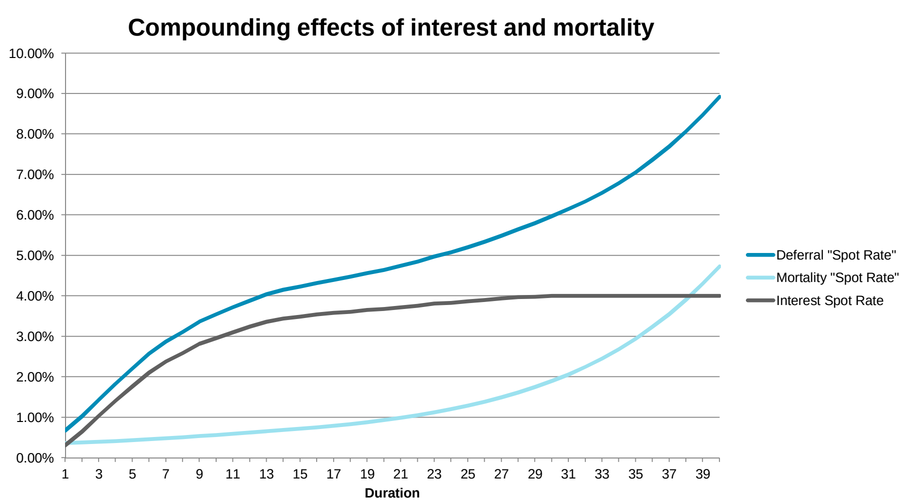
Interest rate considerations



Mortality as an investment



The power of deferral



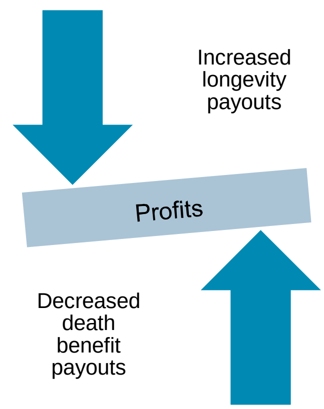
Corporate integration of risk

- Longevity risk
- Investment risk

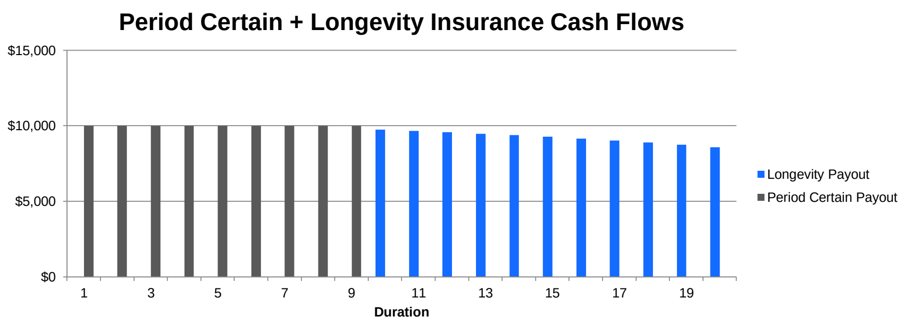
Longevity risk: the life insurance offset

Unexpected increases in longevity are not always harmful to insurers.

- Not a perfect match
  – Age distributions
  – Anti-selection



Investment risk: product pairing



Proper cash flow matching can increase profitability for both products.

3 | Retirement Planning for Longevity

Current retirement environment

1 People are living longer

2 Defined benefit has been replaced by defined contribution

3 The majority of retirement advice is focused on accumulation

The burden of retirement income has increased and shifted to unprepared investors.

Comparison to GLWB
Why the discrepancy in sales?

Longevity Insurance	GLWB
Guaranteed cash flows for life	Guaranteed cash flows for life
Limited withdrawal flexibility	More freedom to access money
Concerns about "getting nothing"	Attractive marketing rate (10% rollup!)
Modest (and final) commission	Higher commission, potential for more

Two proposed retirement models
Model 1 – Accumulated Wealth

Lump sum at retirement → **20 years of controlled spending** → **Pure longevity insurance of tail risk**

- Use 10% of assets to purchase pure longevity contract
- Invest remaining 90% appropriately

- Spend down retirement pool over clearly defined time period

- At age 85, longevity insurance benefit payments commence for remainder of life

Maintain flexibility while defining your retirement needs.

Two proposed retirement models
Model 2 – Income Planning

Pension replacement funding → **Target income level** → **Retirement on defined benefit**

- Contribute 5% of paycheck to pension replacement longevity product beginning at age 35

- Use guaranteed income benefit to gauge appropriate retirement date

- Retire with desired salary replacement level achieved

Guarantee your current lifestyle.

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