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Payout Annuities Under GAAP

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GAAP for Payout Annuities FASB 60 and FASB 97

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Agenda

- Product Classification
- Accounting Guidance
- Example
- Earnings Patterns
- Practical Issues

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Product Classification

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Product Classification Choices

- Investment Contract (FASB 97)
- Limited Payment Life Insurance Contract (FASB 60, modified by FASB 97)

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Accounting Guidance

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Accounting Guidance if Investment Contract

- FASB 97 type income statement presentation (e.g., premiums not separately identifiable)
- Practice Bulletin 8 states that constant yield method should be used with best estimate cash flow assumptions
- Loss recognition is limited on investment contracts

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Constant Yield Method

- Reserve interest rate determined at issue so that PV of payments and maintenance expenses = Gross premium less deferrable expenses
- Reserve (net of DAC) = PV of future payments and expenses, using this interest rate

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Accounting Guidance if Limited Pay Contract

- FASB 60 type income statement presentation (e.g., premiums are separately identifiable)
- Benefit reserve determined under FASB 60 (realistic assumptions for benefits and maintenance expenses at issue with PAD)
- No DAC for single premium contract

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Accounting Guidance if Limited Pay Contract (cont'd)

- Set up Unearned Revenue Liability (gross premium - deferrable expense - initial reserve)
- Amortize URL in relation to reserves

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Payout Annuity Example

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Product Structure and Best Estimate Assumptions

- Earned Rate = 7.00%
- $15,000 annual payment at end of each year for 15 years
- $45 maintenance expense at end of each year for 15 years
- Deferrable Acquisition Expense = 5.5% of premium
- Non-deferrable Acquisition Expense = 0.75% of premium

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Gross Premium Structure and Derivation

- Gross Premium Structure
  - “Credited Rate” = Earned Rate - 1.00% = 6%
  - 6% Premium Load
  - No maintenance expenses
- Gross Premium Derivation
  - PV of annual payments at 6% = $145,684
  - Gross Premium = $145,684 / (1 - .06) = $154,983

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Constant Yield Method
Derivation of Valuation Interest Rate

- Initial reserve derivation
  - Gross Premium = $154,983
  - Deferrable Expense = 5.5% (Gross Premium) = $8,524
  - Net Premium = $154,983 - $8,524 = $146,459
- Valuation interest rate derivation
  - PV of future benefits and expenses, discounted at 5.96%, = $146,459 at issue
  - Therefore, valuation interest rate = 5.96%

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Constant Yield Method
Reserves

	Year 1	Year 5
Reserve B.O.Y.	0	118,873
+ Gross Premium	154,983	0
- Deferrable Expense	(8,524)	0
+ Interest (5.96%)	8,735	7,090
- Benefits & Expenses	(15,045)	(15,045)
= Reserve E.O.Y.	140,149	110,918

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Limited Pay Method

- For simplicity, assume no PADs; therefore, reserve assumptions equal pricing best estimates
- Reserve at issue = PV of future benefits and expenses, discounted at 7.00% = $137,029 at issue

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Limited Pay Method Reserves

	Year 1	Year 5
Reserve B.O.Y.	0	112,818
+ Net Premium	137,029	0
+ Interest (7.00%)	9,592	7,897
- Benefits & Expenses	(15,045)	(15,045)
= Reserve E.O.Y.	131,576	105,670

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Limited Pay Method
Unearned Revenue Liability(URL)

- Initial URL = Gross Premium - Deferrable Expense - Initial Reserve = \$154,983 - \$8,524 -\$137,029 = \$9,430
- URL Amortization Ratio
  - PV of future beginning of year reserve balances = \$926,145
  - Amortization ratio = \$9,430 / \$926,145 = 1.018%

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Limited Pay Method
URL Calculation

	Year 1	Year 5
URL B.O.Y.	0	6,123
+ Deferred Revenue	9,430	0
- Amortization (1.018%)	(1,395)	(1,148)
+ Interest (7.00%)	562	348
= URL E.O.Y.	8,597	5,323

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Comparison of Reserves

Year	Constant Yield Method*	Limited Pay Method**
1	140,149	140,173
2	133,464	133,506
5	110,918	110,992
10	63,436	63,488

* reserve, net of DAC

** reserve + URL

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Earnings Patterns

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Earnings Patterns

- Pre-tax income emerges as:
  - Approximately a level % of reserves (in both accounting models)
  - + “Release from risk” (if classified as life insurance contract)
  - - Non-deferrable acquisition and overhead expenses
  - + Investment income on assets backing GAAP equity

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Earnings Patterns

Constant Yield Method

	Year 1	Year 5
GAAP Book Profit	273	1,231
+Non-deferrable expense	1,162	0
+ Inv inc on above item	81	0
= Adjusted Book Profit	1,516	1,231
BOY Reserve	146,459	118,873
Adj Bk Profit / BOY Reserve	1.04%	1.04%

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Earnings Patterns

Constant Yield Method (cont'd)

	Rate
Earned Rate	7.00%
- Constant Yield	(5.96)
= Profit Margin	1.04%

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Practical Issues

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Practical Issues

- Effect of realized capital gains
- Impact of mortality improvement
- Flat versus declining interest rate assumptions

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