

$$Y = A \left(\cosh \frac{X}{L} C - 1 \right)$$

$$X = \frac{L}{C} \left[\cosh^{-1} \left(1 + \frac{Y}{A} \right) \right]$$

$$\text{Where, } A = \frac{fc}{\frac{Q_b}{Q_t} - 1} = 68.7672$$

$$C = \cosh^{-1} \frac{Q_b}{Q_t} = 3.0022$$

$$fc = \text{Max. Ht. of Centroid} = 625.0925$$

$$Q_b = \text{Max. X-Sec. @ Arch Base} = 1262.6651$$

$$Q_t = \text{Min. X-Sec. @ Arch Top} = 125.1406$$

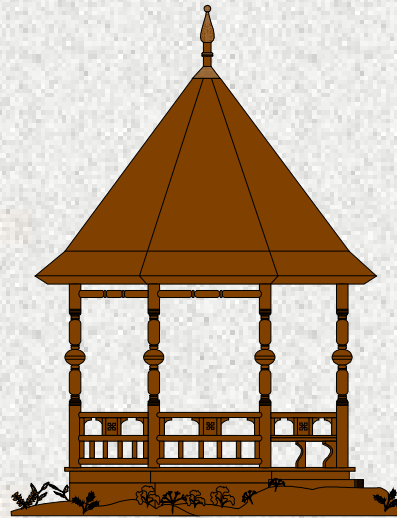
$$L = \text{Half of Centroid @ Arch Base} = 299.2239$$

General American Agent Meeting

Living in a XXX World

February 4, 2000

St. Louis, MO

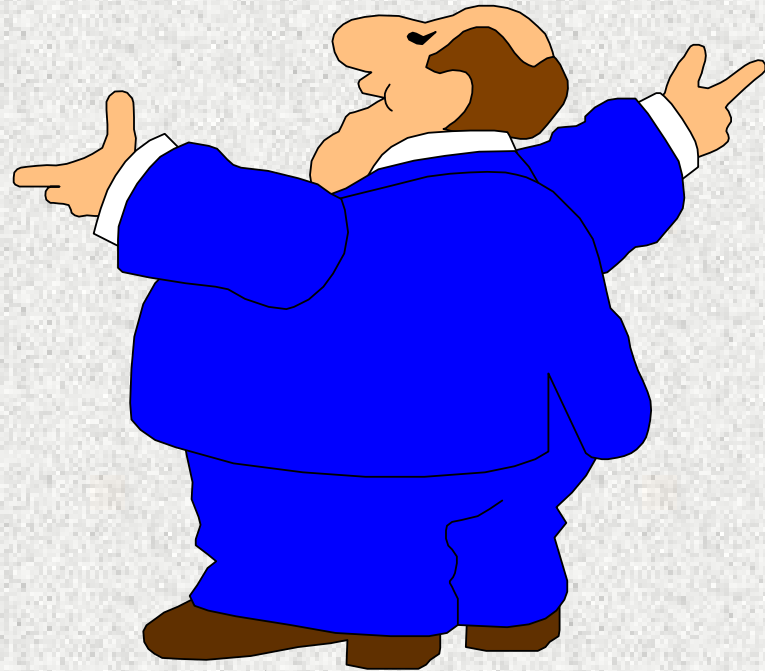


James N. Van Elsen

Consulting Actuary
Van Elsen Consulting
Colfax, Iowa

Presentation Outline

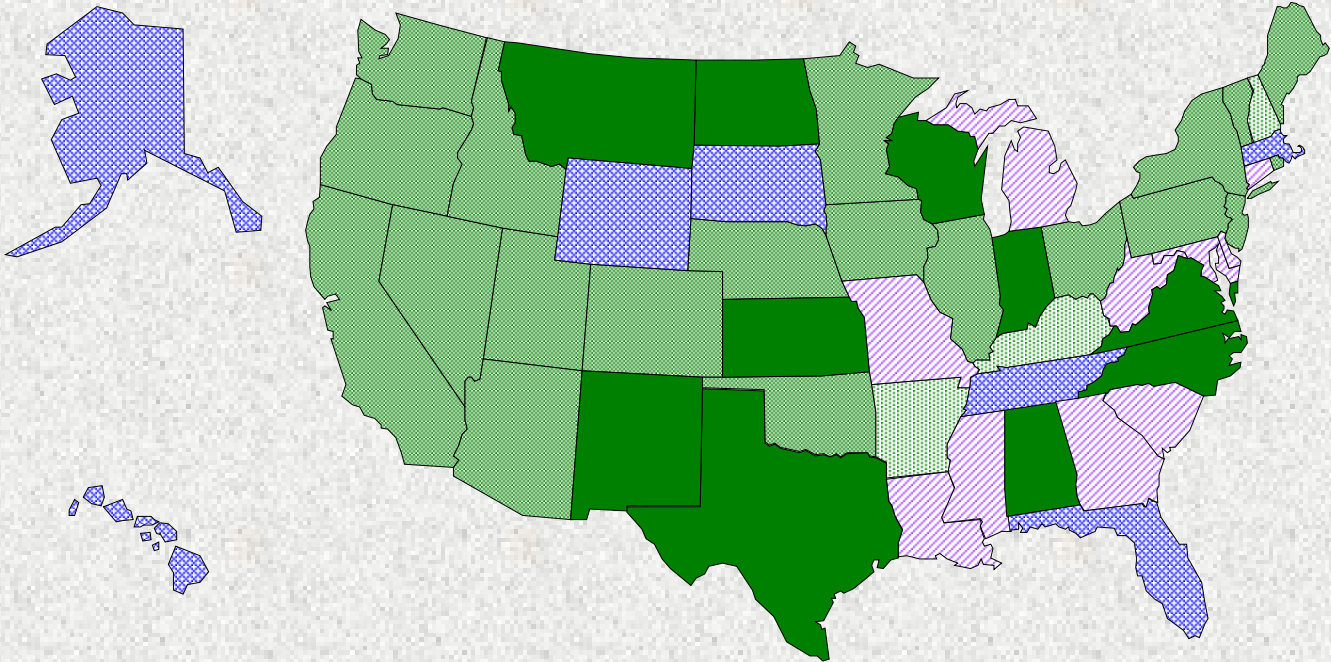
- ◆ Update on XXX
- ◆ Quick Overview
- ◆ Product Development Choices



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Update on XXX



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Current Status (As of 12/15/99)

- **States Which Have Adopted 1/1/2000 (10 States)**

AL IN KS MT NM NC ND TX VA WI

- **States Planning to Adopt 1/1/2000 (20 States)**

AZ CA CO ID IL IA ME MN NE NV NJ NY OH OK
OR PA RI UT VT WA

- **States Planning to Adopt, Date Not Set (3 States)**

AR KY NH

- **States Under Active Review (10 States & DC)**

CT DE DC GA LA MD MI MS MO SC WV

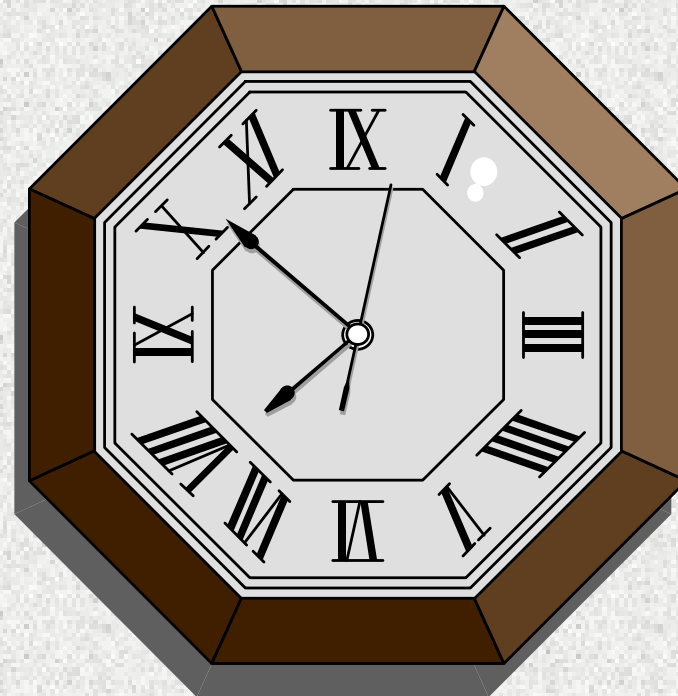


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Quick Overview of XXX

- ◆ Segmented Reserves
- ◆ Compare to Unitary
- ◆ New 20-Year Factors
- ◆ New X Factor for Deficiency Reserves
- ◆ UL Secondary Guarantees
- ◆ Many Exceptions

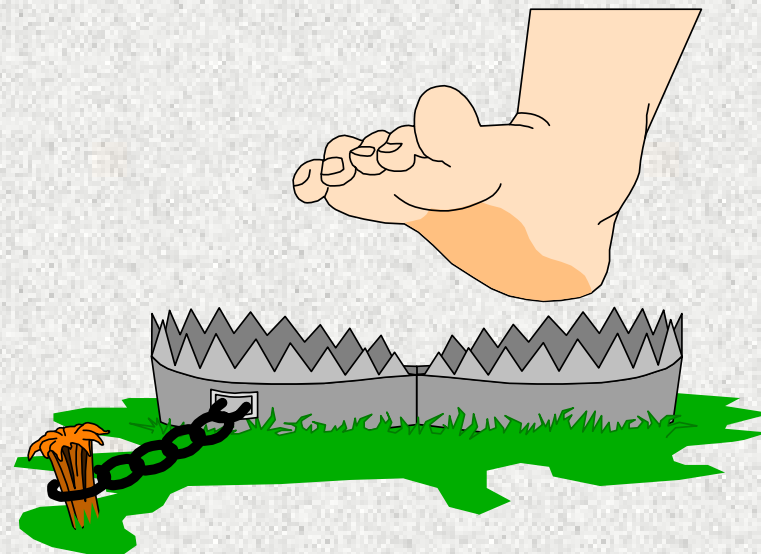


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Potential Problems

- ◆ Ultimate Premiums No Longer “Subsidize”
- ◆ Long Guarantee Periods
- ◆ X Factor
- ◆ UL Secondary Guarantees
- ◆ Multiple Guarantees



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Product Development Choices

- ◆ Reduce Guarantee Periods
- ◆ Increase Premiums
- ◆ Reduce Guaranteed Benefits
- ◆ Reinsurance
- ◆ “Non-Guaranteed”
Guarantees
- ◆ Shadow Accounts
- ◆ Do Nothing?

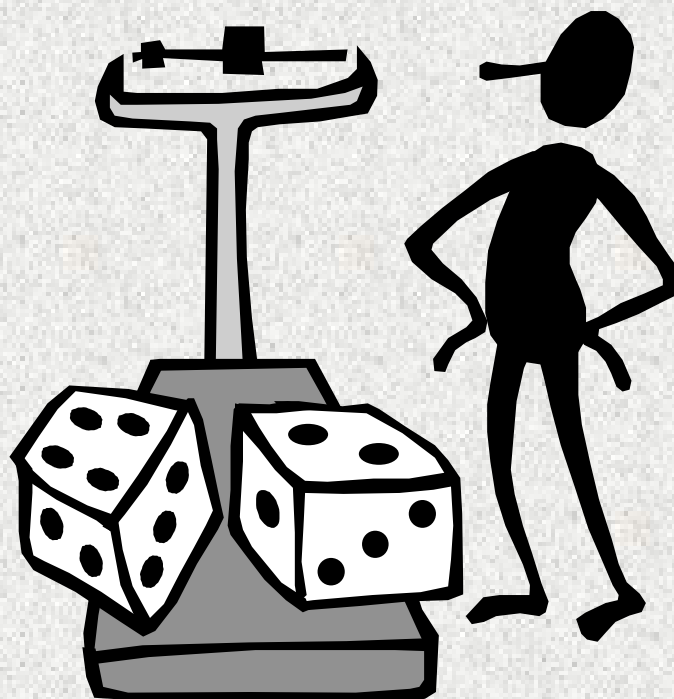


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Reduce Guarantees

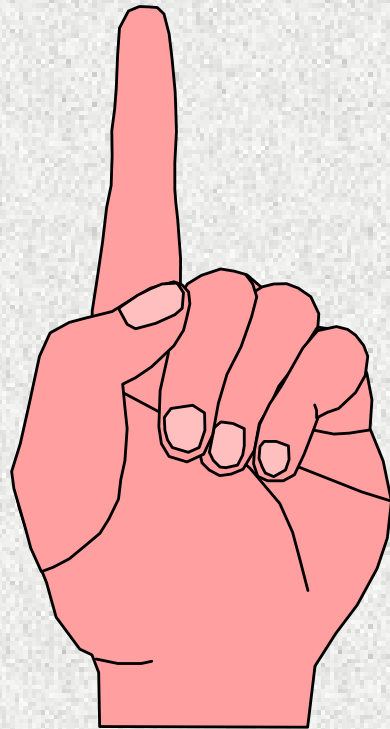
- ◆ Basic Reserves Extremely High for 20 - 30 Year Guaranteed Products
- ◆ Deficiencies May Be a Factor on Preferred Classifications
- ◆ No 5-Year “Safe Harbor”
- ◆ May Require Illustration



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Increase Premiums



- ◆ May Be Market for Full Guarantees
 - Internet
 - No Illustration Required
- ◆ Product of Choice in NY
- ◆ Market Will Be Intense

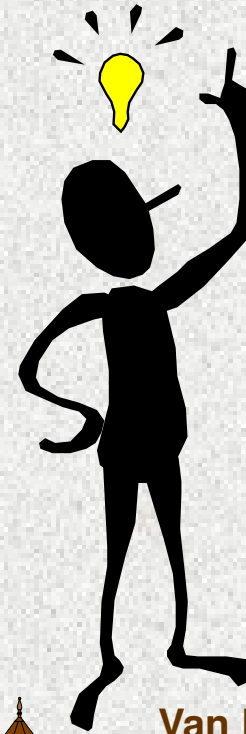


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Reduce Guaranteed Benefits

- ◆ Revert to Decreasing Term After Guarantee Period
- ◆ Use Non-Guaranteed Death Benefits to Maintain Level Benefit
- ◆ May Work Best for Par
- ◆ Untested Market



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Reinsurance

◆ Leave for Mike



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Non-Guaranteed Guarantees?

- ◆ Restrict Ability to Increase Rates
- ◆ Provide Options if Rates are Increased
- ◆ Potential Gimmicks?



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Shadow Accounts

- ◆ UL with 2nd Account
Mirroring Transactions
- ◆ Policyowner Cannot
Access Shadow Account
- ◆ If Positive, Policy
Remains Inforce
- ◆ What Reserves?

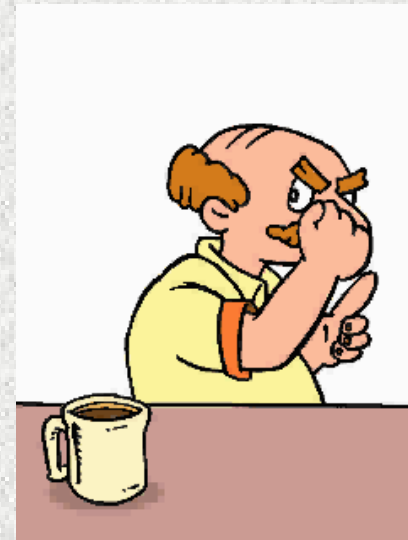


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Be Careful!!!

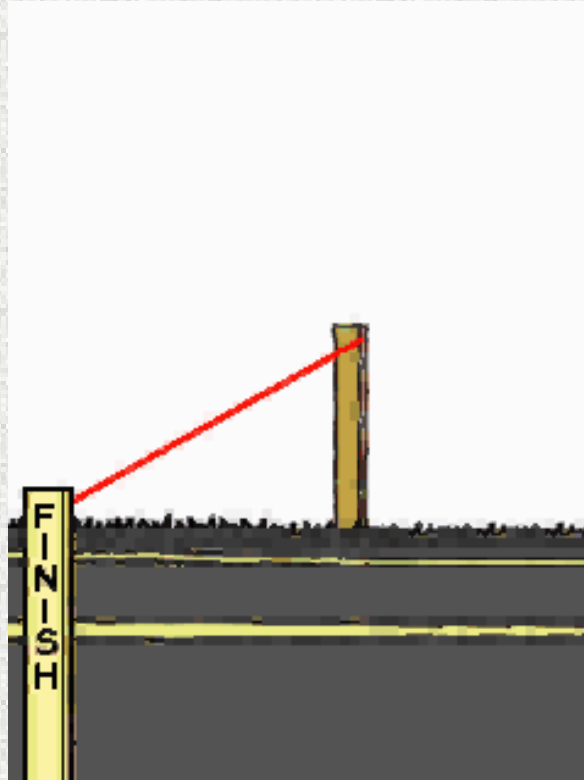
- ◆ Pay Attention to Intent of Regulation
- ◆ If It Smells Like a Guarantee, It Probably Is
- ◆ Retroactive Decision Could Be Disastrous



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The End



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