

Variable Annuity DAC

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AIG Retirement Services

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Variable Annuity DAC

- Show Cartoon

Variable Annuity DAC

- SFAS 97 – Review the Basics
 - Application to Investment-type Products
 - Fixed and Variable Deferred Annuities
 - Amortization of Deferred Acquisition Costs
 - Level Percentage of Gross Profits
 - Gross Profits
 - Estimated Future Gross Profits
 - Gain by source excluding deferrable expenses
 - Actual Gross Profits

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- Unlocking DAC Amortization
 - Revisions to Estimated Gross Profits
 - Recalculate the DAC Asset
 - Change in Asset Flows through Income Statement

- DAC at Beginning of the Period
 - + Interest Earned on DAC
 - + New Capitalizations
 - DAC Amortization
 - +(-) DAC Unlocking (Catch-up)
 - = DAC at End of Period

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- Key Actuarial Assumptions
 - Product Design and Client Considerations
 - Single Premium vs. Flexible Premium
 - Distribution Channel
 - General Account/Separate Account Allocations
 - Separate Account Options
 - Policyholder Characteristics
 - Revenues
 - Expenses
 - Market Growth Rate
 - Persistency

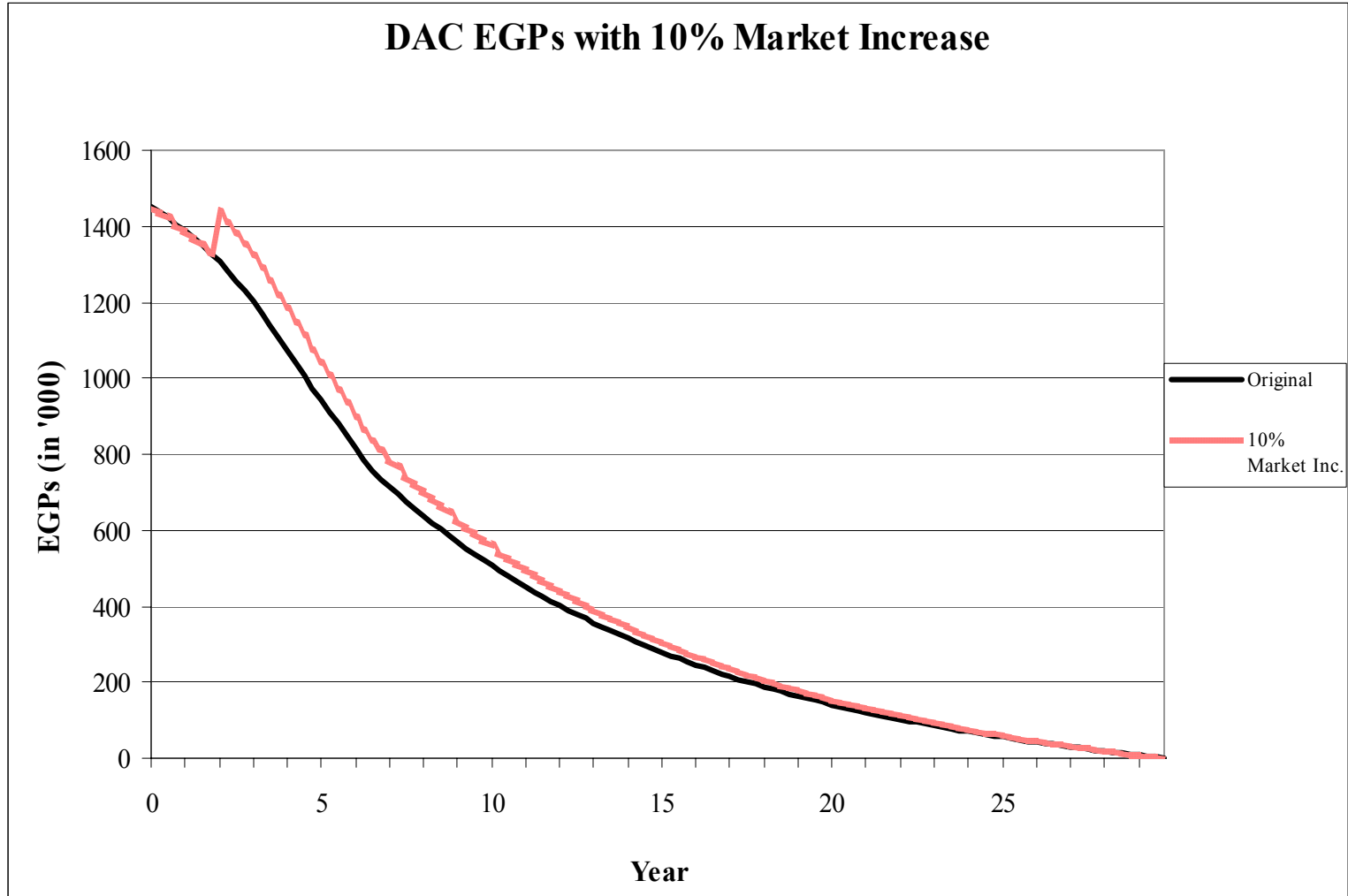
Variable Annuity DAC

- Amortization Schedule
 - Amortization Period
 - Determination of Amortization Ratio or “k-factor”
 - $PV \text{ Deferred Acq. Costs} / PV \text{ Expected Gross Profits}$

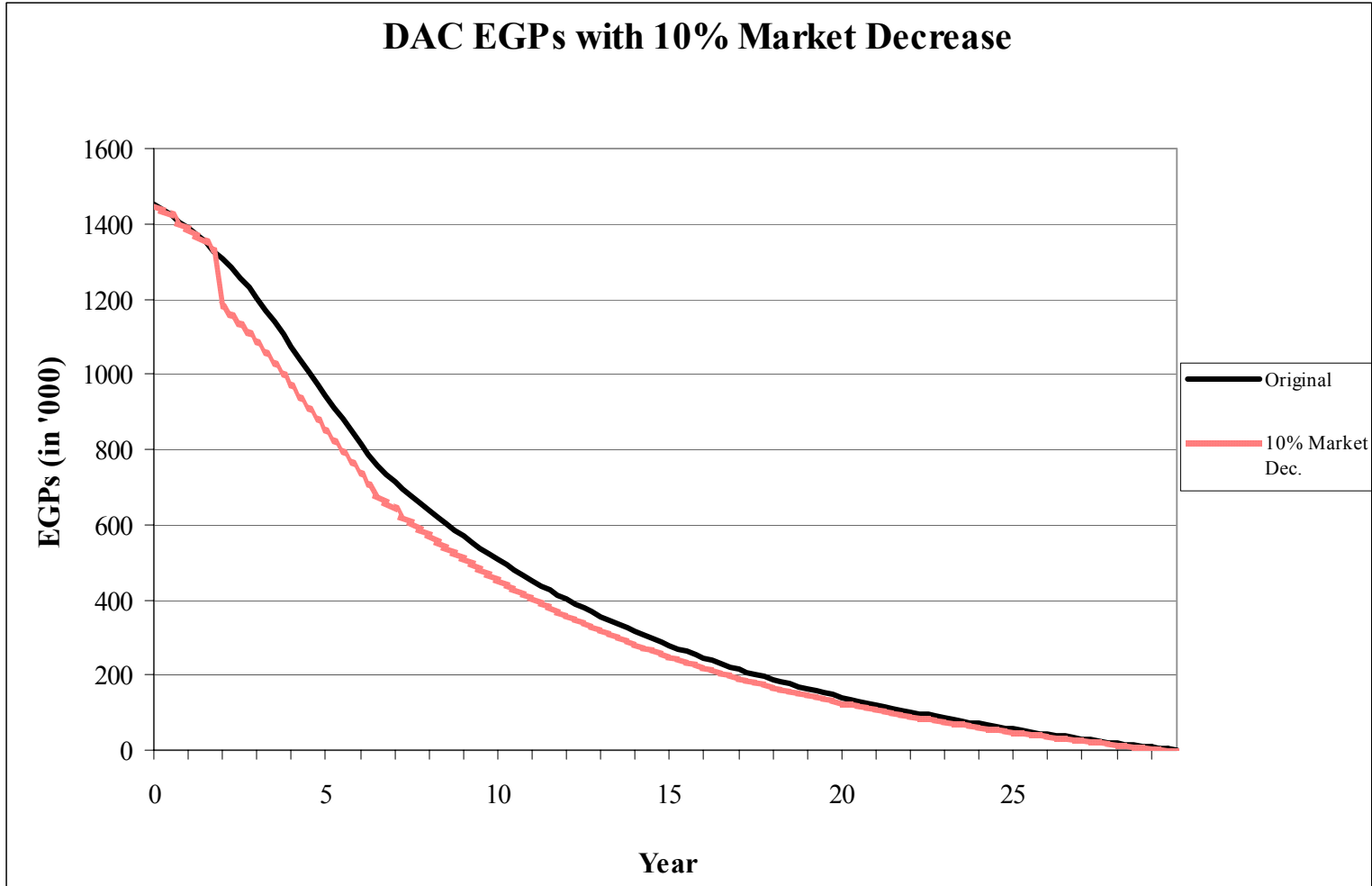
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- Variable Annuity Considerations
 - Best Estimate Assumptions
 - Traditional Actuarial Assumptions
 - Separate Account Returns
- Investment Market Assumptions
 - Volatile Returns
 - Point-in-time Sensitivity

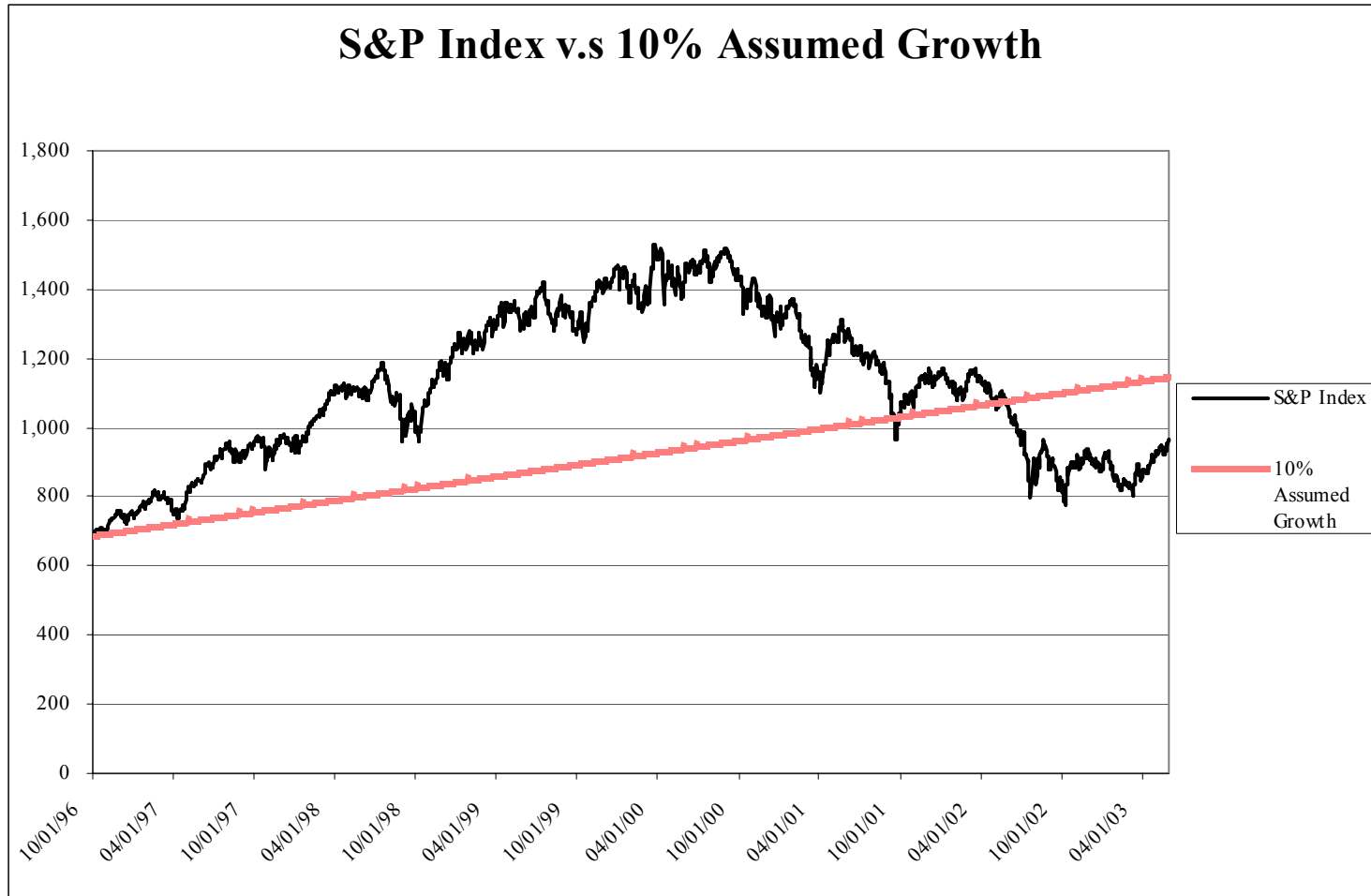
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- Methodologies for Handling Market Effects
 - Stochastic Methods
 - Theoretically Interesting
 - Not Generally Directly Used for DAC Amortization
 - Can Provide Parameters for Deterministic

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- Deterministic Methods
 - Develop Long Term Market Growth Rate
 - Adjust for Asset Management Expenses
 - Adjust for Contract Charges
 - Implementation Varies Among Companies

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Earnings Pattern Using the Traditional Method of DAC Amortization

Period	1	2	3	4
Earnings before Dac Amort	\$ 100,000	\$ 100,000	\$ 100,000	\$ 100,000
k factor	50%	52%	49%	50%
Normal DAC Amort	\$ 50,000	\$ 52,000	\$ 49,000	\$ 50,000
Equity Market Change During the Period	10%	0%	18%	12%
Expected Equity Market Change	10%	10%	10%	10%
Unlocking Amortization	\$ -	\$ 20,000	\$ (17,000)	\$ (4,000)
Total Amortization	\$ 50,000	\$ 72,000	\$ 32,000	\$ 46,000
GAAP Earnings	\$ 50,000	\$ 28,000	\$ 68,000	\$ 54,000

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- Mean Reversion
 - Adjusting for Actual Market Returns
 - Application of Reversion Method
 - Prospective Only
 - Reversion to Mean Period
 - Corridor for Reversion Assumption

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Mean Reversion Formula

Ei = Expected Growth Rate

Ai = Actual Growth Rate for the Current Period

Ri = Revised Growth Rate for the Period t

t = Reversion Period Chosen by the Company

$$[1 + Ei]^{(t+1)} = [1 + Ai] \times [1 + Ri]^t$$

$$Ri = [(1 + Ei)^{(t+1)} / (1 + Ai)]^{(1/t)} - 1$$

Ei	Ai	t	Ri
10%	10%	5	10.0%
10%	-10%	5	14.5%
10%	20%	5	8.1%
10%	0%	3	13.6%
10%	-10%	3	17.6%
10%	20%	3	6.9%

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- Corridor Method:
 - Define a corridor around one DAC “marker” value
 - Calculate new DAC balance on valuation date
 - If within the corridor, use the “marker” DAC
 - If outside the corridor, unlock
- Long Term EGP
 - Project future EGPs at issue
 - Calculate actual EGPs and evaluate
 - Historical EGPs are trued-up

Variable Annuity DAC

- Public Perceptions
 - SEC Filings
 - 2003 10-k Filings – MD&A Discussions
 - Financial Analysts
 - Heightened Awareness
 - Limited Understanding of FAS 97 Mechanics
 - Concern About Potential DAC Unlocking
 - Rating Agencies
 - Increased Scrutiny of VAs
 - Surveys of DAC Practices

Variable Annuity DAC

- Acknowledgements
 - Stochastic DAC Unlocking for Variable Annuity Products by Alastair Longley-Cook, Dick Shaw, Mike Sherrill and Jay Vadiveloo, The Financial Reporter, 2001
 - Variable Annuity DAC: A Survey of Current Practice by Laura J. Hay and Elizabeth Rogalin, The Financial Reporter, December 2002.