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RIA Conference FAS 157

**Grotto Bay Hotel
Tuesday, May 13, 2008**

ACE Tempest Life Re

FAS 157

- **Background on FAS 157**
- **Application of FAS 157 to VA Guarantees**
 - **From Reinsurer/ ACE's Perspective**
 - **From Direct VA Writer's Perspective**
 - **Feedback / Discussion**



Background on FAS 157

Financial Accounting Standard No. 157, Fair Value Measurements (“FAS 157”)

- Establishes framework for measuring fair value and expands disclosures
- Applies under prior accounting pronouncements, i.e. FAS 133
- No new fair value measurements, but may change current practice for some



Background on FAS 157

Changes to current practice relate to:

- **Definition** of fair value
- **Methods** used to measure fair value
- **Disclosures**



FAS 157 Background: Definition

“**Exchange Price**” = price to transfer asset in the principal or most advantageous market, a hypothetical transaction at measurement date

- **Emphasizes “exit price”** – a market-based measure, not entity-specific
- **Hierarchy of input levels:**
 - **Level 1**: quoted prices in active markets for identical asset or liability
 - **Level 2**: quoted prices for similar asset or liability and market-corroborated inputs
 - **Level 3**: entity’s own assumptions about unobservable market participant assumptions based on best information available



FAS 157 Background: Definition

Level 3 Inputs:

- Entity need **not** undertake all possible efforts to obtain information about market participants assumptions
- However, entity should not ignore market information
- Entity's own data used to develop unobservable inputs should be adjusted if information is "reasonably available without undue cost and effort" that indicates market participants would use different assumptions



FAS 157 Background: Measurement Methods

- **Risk adjustment**
 - Must include an explicit risk margin
- **Fair value at initial recognition**
 - In most cases, entry price = exit price
 - May not always hold true, e.g if transaction occurs between related parties or under duress
- **Nonperformance risk**
 - Liability FV must reflect risk that obligation may not be fulfilled, i.e. must include reporting entity's own credit risk
- **Change in valuation technique**
 - Change appropriate if new markets develop, new info available, old info no longer available, valuation techniques improve
 - Accounted for as change in accounting estimate (FAS 154), but disclosure provisions of FAS 154 do not apply.



FAS 157 Background: Disclosures

Expanded fair value disclosures, particularly for Level 3:

- Fair value measurements at the reporting date
- Level within the fair value hierarchy (1, 2 or 3)
- For Level 3, a reconciliation of the beginning and ending balances
- Amount of total gains/ losses that are attributable to the change in unrealized gains/losses
- In annual periods only, description of the valuation technique(s) and any changes in technique



FAS 157 Application: Reinsurer

- **VA Contracts deemed to be derivatives:**
 - GMWB contracts for both reinsurers and direct writers
 - GMWB for Life?
 - GMIB reinsurance treaties that are net settled
 - Not GMIB contracts for direct writers
 - GMAB contracts

- **For Reinsurers:**
 - Reinsurance contract is the derivative, future business added under same risk margin
 - Amendments may or may not create a new derivative



FAS 157 Application: Reinsurer

Two main methods for calculating fair value:

▪ **Benefit Ratio Method:**

- Rider fee is split into benefit cost fee + risk charge
- At issue, Benefit Cost Fee calculated as average fee that sets PV benefit cost fee = to PV claims
- Post issue, fair value = PV benefits less the PV benefit cost fee

▪ **Interest Spread Method:**

- Derivative is a total return swap, swapping benefit payments for an asset equal to premiums
- At issue, Risk Spread calculated as spread on asset discount rate that sets PV premium = PV claims
- Post issue, fair value = PV benefits less PV premiums, where premium discount rates include Risk Spread



FAS 157 Application: Reinsurer

Implementation issues for reinsurer:

- **Negative Risk Margin:**
 - FAS 157 requires explicit positive risk margin
 - Must take loss at issue if risk margin <0
- **Changes to Risk Margin:**
 - A binding quote may warrant change in market price
- **Profit Recognition on Future Fees:**
 - Should negative FV (i.e. an asset) be limited?
 - Collectibility of future premium questionable – lapses
 - Would third party pay positive fee to obtain business?
- **Bifurcation:**
 - Reinsurer has option to fair value combined GMDB/ GMIB deal or to bifurcate out GMIB portion



FAS 157 Application: Reinsurer

Implementation issues (cont.):

- **Risk Margin for Non-financial Assumptions**
 - Not an issue for reinsurer since already priced into treaty
- **Discount Rates:**
 - Claims must be discounted at reinsurer's cost of funds
 - Downgrade => lower fair value => net gain
- **Split Accounting Presentation:**
 - Show fees as premium and SOP 03-1 reserves
 - Other changes in fair value classified as realized G/ L
- **Risk Neutral Scenarios:**
 - Equity volatility inputs - sources
 - Non-US economies – sources of interest rates, vols
 - Asset fees
 - Calibration to various¹² option market prices



E&Y FAS 157/ 159 Implementation Survey Results

Ersnt & Young surveyed 45 major financial institutions in late 2007, including 9 insurance companies. Following are a few excerpts from Insurance Liabilities section:

Insurance Liabilities

Without considering the Fair Value Option, the following insurance liabilities are recorded by respondents at fair value:

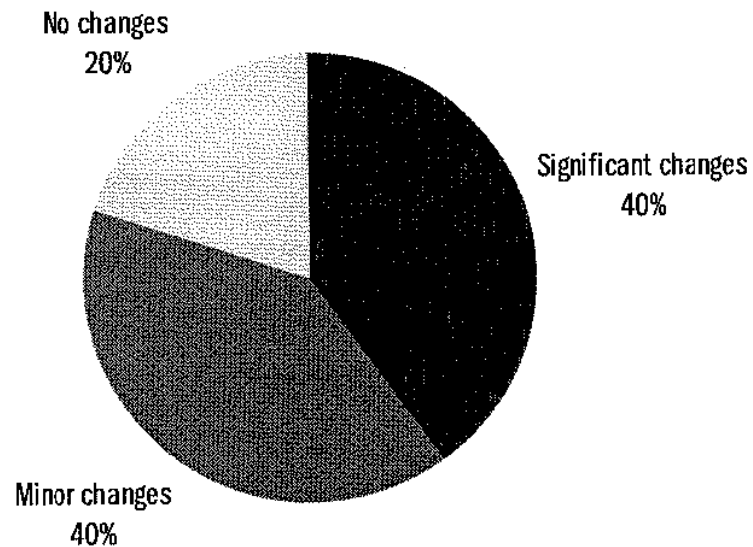
- Variable annuity guarantees (e.g., GMWB riders)
 - EIA embedded derivatives
 - Reinsured GMIB that are net settled
 - Portion of MODCO embedded derivatives
- 60% of respondents indicated that there would not be a significant change in the valuation for these insurance liabilities under the FAS 157 conceptual framework.



E&Y FAS 157/ 159 Implementation Survey Results

Embedded Derivatives in Variable Annuities

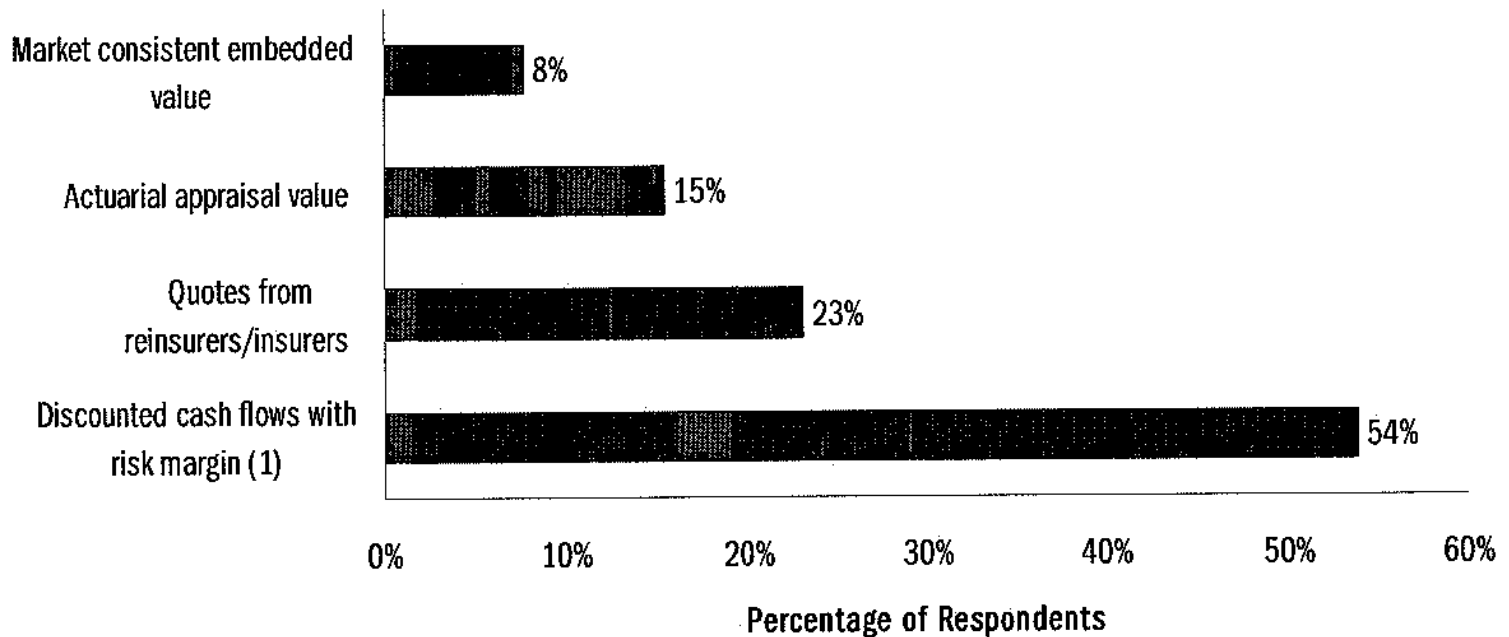
The following chart indicates the extent of changes expected in valuation methodologies associated with embedded derivatives in variable annuities:



E&Y FAS 157/ 159 Implementation Survey Results

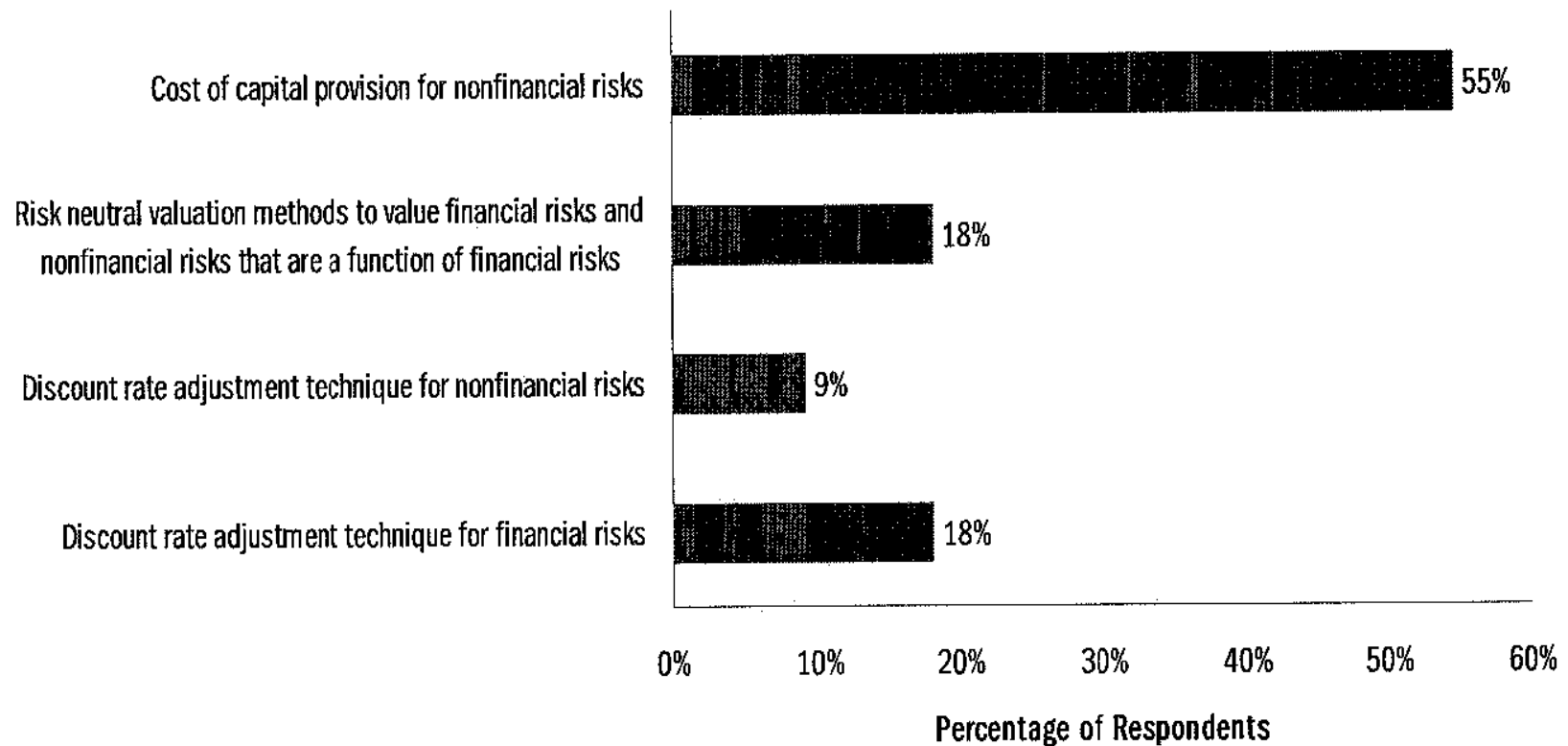
Fair Value Methodology

The following indicates the general methodology/approaches used/expected to be used in determining the fair value of insurance liabilities:



E&Y FAS 157/ 159 Implementation Survey Results

(1) For the respondents calculating a risk margin, the following methods were deemed the most appropriate:



E&Y FAS 157/ 159 Implementation Survey Results

Background on FAS 159, “The Fair Value Option”

- **One-time election to fair value certain instruments**
- **Objective - allows entities to mitigate volatility in reported earnings without having to apply complex hedge accounting provisions**
 1. **May be applied instrument by instrument**
 2. **Is irrevocable (unless a new election date occurs)**
 3. **Is applied only to entire instruments and not portions of instruments**

Fair Value Option

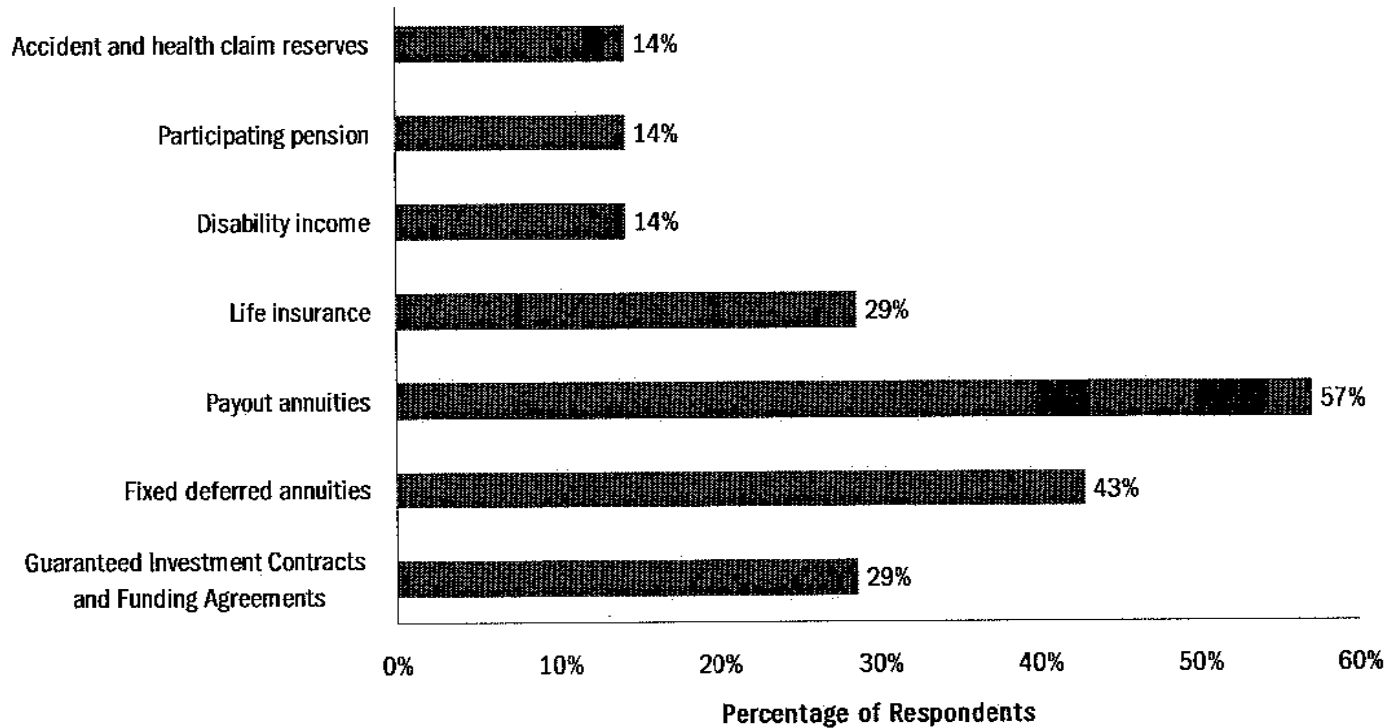
- 39% of respondents elected/expect to elect the FAS 159 Fair Value Option for insurance-related liabilities.
- 55% of respondents cited better accounting and 45% of respondents cited reduction in volatility as their primary motivation for the FAS 159 Fair Value election.



E&Y FAS 157/ 159 Implementation Survey Results

Items for FVO Election

The following chart indicates the liabilities being considered for the Fair Value Option by the respondents:



FAS 157 Application: Direct Writer

Potential 157 implementation issues for direct writer:

- FVL calculation method: interest spread or benefit ratio?
- How to determine pricing cohorts for calibrating FVL
- Calculation of risk margin for non-financial assumptions in model
- Calculation of risk neutral returns:
 - Equity volatility assumptions: single point, term structure, or volatility surface?
 - Returns gross or net of fund fees, m&e fees, rider fees?
- Movement of fair value vs. hedges
- Mismatch of ceded business (fair-valued) vs. underlying business (SOP 03-1 accounting treatment)

