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**Valuation Actuary Symposium
September 24- 25, 2009**

Session 9 PD: US GAAP Issues

[Marina Adelsky, FSA, MAAA](#)
[Brian P. Lenius, FSA, MAAA](#)
[Patricia E. Matson, FSA, MAAA](#)

Moderator

Patricia E. Matson, FSA, MAAA



Agenda

- What is DAC unlocking
- Unlocking related to change in methodology
- Unlocking related to change in assumptions
- DAC capping
- Loss recognition – when and how

FASB Accounting Standards Codification

- Single authoritative source for US GAAP
- Did not change US GAAP but changed the way US GAAP is referenced in Financial Statements and accounting policies
- No more FASB statements, FASB staff positions (FSP), EITFs etc.
- Will use both old reference and Codification in this presentation

What is DAC unlocking?

- Change in current period amortization of DAC
 - Current period true-up
 - Difference in estimated current period gross profits/gross margins and actual gross profits/gross margins
- Change in estimated future gross profits/margins (EGPs/EGMs)
 - Changes in methodology
 - Changes in assumptions

Unlocking related to change in methodology

- Change in the way the elements of EGMs/EGPs are calculated
 - Change in the way current and future RCG are reflected in projected dividends
 - Change in FV calculations as reflected in EGP
 - Change in Reversion to Mean methodology
 - Caps/Floors
 - Change in duration of RTM, elimination of RTM

Reversion to Mean

- Some companies use only for Annuity business, some use for both Life and Annuity
- The length of reversion is 4 - 7 years
- The means range from 7.5% to 9.5%, some use net of investment expenses, some use gross
- The caps range (for companies that had caps) was 12%-15%
- In 2008 it came into play and companies started rethinking these caps

Reversion to Mean Example

Example 1

Before reversion to mean		Assum. 1	Assum. 2	Assum. 3	Assum. 4
Period	Actual				
SA growth	-9%	-0.5%	6%	7%	8.5%
DAC amort.	4 mill				

After reversion to mean		Assum. 1	Assum. 2	Assum. 3	Assum. 4
Period	Actual				
SA growth	-9%	7.5%	8%	8%	8.5%
DAC amort.	(-4.5 mill)				

Example 2

Before reversion to mean		Assum. 1	Assum. 2	Assum. 3	Assum. 4
Period	Actual				
SA growth	30%	3.0%	8.5%	8.5%	8.5%
DAC amort.	(20 mill)				

After reversion to mean		Assum. 1	Assum. 2	Assum. 3	Assum. 4
Period	Actual				
SA growth	30%	0.0%	0.0%	3%	8.5%
DAC amort.	18.0 mill				

Unlocking related to change in assumptions

- Impact of change in future assumptions on the elements of EGMs/EGPs
 - Change in economic assumptions
 - GA and SA spreads
 - Dividends
 - Projected SOP-03 reserves, FVs, cost of hedges etc.
 - Discount
 - Change in lapse/mortality/expenses/premium continuation/annuitization assumptions
 - Projected AVs and related values
 - Projected SOP-03 reserves, FVs

DAC capping

- Can DAC asset exceed capitalized costs?
- How can cap be calculated
 - By legal entity?
 - By year of issue?
 - Products with lock-in DAC
- Shadow DAC too?
- What about Sales Inducements? URR?
 - Specific to product and YOI

944 – 60 Premium Deficiency and Loss Recognition

- 25-7 Actual experience with respect to investment yields, mortality, morbidity, terminations, expenses may indicate that existing contract liabilities together with the present value of future gross premiums, will not be sufficient to do both of the following
 - Cover the present value of future benefits
 - Recover unamortized acquisition costs

944 – 60 Premium Deficiency and Loss Recognition

- 25-3 Insurance contracts shall be grouped consistent with the entity's manner of acquiring, servicing, and measuring the profitability of its insurance contracts to determine if premium deficiency exists
 - Same expense allocation process/distribution system?
- Can term life be combined with permanent life products and UL products?

Loss recognition testing for Immediate Annuities

Mortality assumptions

Improvements

Adjustments for different annuity types

Select rates

Maintenance expenses, inflation

Discount at net projected portfolio rates

how are they determined (consistency with other economic assumptions); short term vs long term



FSP 115-2

*Recognition and Presentation of
Other-Than-Temporary Impairments*

*Valuation Actuary Symposium
September 24, 2009*



Background

- ❖ On April 9, 2009, a Financial Accounting Standards Board (FASB) Staff Position (FSP) on Accounting for Asset Impairments is released
- ❖ Legislation enacted by the United States Congress leading to actions by the U.S. Securities and Exchange Commission (SEC) resulted in a FASB study of impairment accounting
- ❖ Concerns about the reporting of Unrealized losses on debt securities were tackled in the FSP
 - Differentiating unrealized losses into credit loss related, and non-credit loss related elements were addressed
 - Specifically, the SEC's desire that credit losses flow through net income, and other losses be reported in other comprehensive income was acted upon

- ❖ The pronouncement followed on the recent chaos in the capital markets
- ❖ The intent is to more clearly represent the capacity of securities to deliver value in financial statements
 - We are required to decompose impairments to security value into credit and non-credit related elements and report them discretely

- ❖ Applies to Debt Securities
 - Available for Sale
 - Held to Maturity
- ❖ Recognition of “loss event”
 - “Other Than Temporary Impairment” (OTTI)
 - Scope covers *all types* of “other than temporary impairments”

- ❖ Segregation between impairments to expected cash flows (credit impairments) and other market costs on disposition is required in some cases
 - Referred to as “Bifurcation of Loss”
- ❖ The pronouncement provides further clarification about how to characterize the likelihood of asset disposition before maturity through accounting

- ❖ Placement of loss recognition on the financial statements
- ❖ “Bifurcation of Loss”

- ❖ “Bifurcation of loss” reporting treatment:
 - When security disposition is not likely, losses expected from credit events are to be separated from other changes in security market value for reporting
 - “Held to Maturity” securities may have losses recorded in other comprehensive income
 - “Available for Sale” securities may produce either a write up or write down to other comprehensive income in the period in which a credit impairment is reported
- ❖ There is no bifurcation of loss if security disposition before maturity is likely
 - ⇒ All losses go through Net Income

Facts and Circumstances

- ❖ Accounting Category: “Available for Sale”
- ❖ Strong indications that a debt security will not deliver scheduled cash flows
 - ⇒ There is an expected credit loss impairment
- ❖ No non-credit loss related OTTIs
- ❖ Disposition prospects of the security:
 - Elective sale of the security is not anticipated
 - Circumstances do not indicate a forced sale
- ⇒ Bifurcation treatment of adjustments to valuation is required

What does it mean to “Bifurcate” in this case?

- | | |
|--|--|
| <p>1) The Decrease in Reported Value related to Credit Impairment is reported in Net Income</p> | $\frac{\text{current RV}^{\text{Credit_Impaired}} - \text{last RV}^{\text{Before_Impairment}}}{\text{NI}}$ |
| <p>2) Other Changes in Market Value, net of Loss Recognized, flow through Other Comprehensive Income</p> | $\frac{\text{current MV} - \text{last MV} - \text{NI}}{\text{OCI}}$ |

Example: Accounting for the Valuation Adjustments

- ❖ Credit loss related adjustments to be reflected in net income
 - Cash flow model to be developed
 - Credit loss impaired value of the security is to be calculated using acquisition yield as the discount rate
- ❖ Other valuation adjustments to be reflected in other comprehensive income

- ❖ If facts of impairment are sufficiently well known, cash flow models can be formed from facts (e.g.):
 - Default with expected time to recovery, and expected recovery amount
 - Tender offer
- ❖ If facts of future cash flows are uncertain, a more general approach to modeling may be needed

- ❖ State the cash flows in the context of known conditions
 - Integrate as much market information as possible into the impairment calculations
- ❖ Decide how much of current yields represent the compensation for expected credit losses
- ❖ Use a survival model and back-solve for model cash flows
 - *This is not a definitive approach; it is one of many approaches*
- ❖ Solve for a “p” value which can be used to attenuate the Scheduled Cash Flows for credit impairments

$$MV = \sum CF_t^{\text{Scheduled}} \cdot p^t \cdot \left(\frac{1}{1 + r^f + ms - cs_adj} \right)^t$$

Example: A more general approach to forming a cash flow model (continued)

$$MV = \sum CF_t^{\text{Scheduled}} \cdot p^t \cdot \left(\frac{1}{1 + r^f + ms - cs_adj} \right)^t$$

- ❖ Most elements of the formula are knowable
 - Market Value (MV)
 - Scheduled Cash Flows ($CF^{\text{Scheduled}}$)
 - Risk Free Rate (r^f)
 - Market Spread (ms)
- ❖ Impaired cash flows can be directly estimated once “p” in the formula is determined

$$CF_t^{\text{Impaired}} = CF_t^{\text{Scheduled}} \cdot p^t$$

- ❖ What about the “cs_adj” value?

Example: What about “cs_adj?” The Spread Provision for Credit Loss

$$MV = \sum CF_t^{\text{Scheduled}} \cdot p^t \cdot \left(\frac{1}{1 + r^f + ms - cs_adj} \right)^t$$

- ❖ “cs_adj”, the spread provision for credit loss is unobservable
- ❖ What might be considered in setting this value?
 - Historical loss studies and spreads
 - References in literature to spread provisions for loss
 - Expert opinions about how much of the market spread might be required as a provision for credit loss
- ❖ This is one of many explicit ways to state an opinion about the character of future cash flow impairments

- ❖ Once credit impaired cash flows have been defined, the reported value for the security can be calculated as:

$$RV^{Credit_Impaired} = \sum CF_t^{Impaired} \cdot \left(\frac{1}{1 + y^{acquisition}} \right)^t$$

- ❖ Acquisition yield is known
- ❖ For future accounting periods following impairment: wash, rinse (and repeat)
 - Utilize the credit impaired cash flow stream

- ❖ What if future conditions change?
 - Security expected to be *more* impaired
 - o Re-estimate impaired cash flows
 - Security has become “unimpaired”
 - o Amortize premium/discount of security into income until maturity

Thank you!

Thank you for attending!

Questions?

USGAAP Update: Fair Value and IFRS

Valuation Actuary Symposium 2009

Patricia Matson, Principal, Deloitte Consulting LLP

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FAS 157 Overview

FAS 157 Current Issues

Impacts of Recent FSPs

Goodwill Implications

Recent IASB/FASB Guidance

FAS 157 Overview

- Generally effective January 2008
- Uses "exit value" premise
- Applicable to any items already fair valued under other USGAAP guidance
- Implies some key differences for actuaries:
 - Maximize use of observable inputs
 - Assumptions based on market participant view
 - Incorporate risk margins
 - Incorporate adjustment for nonperformance risk
- Clarifications provided via several subsequent FASB Staff Positions (FSPs)
- Application to "non financial" items (e.g. purchase accounting and goodwill impairment) generally occurs from January 2009 on

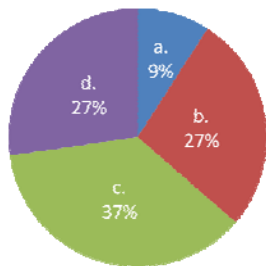
FAS 157 Current Issues

- Magnitude of volatility due to own credit
- Reduced observability of certain inputs (eg implied volatility)
- Implications of liability swings on DAC recoverability
- Challenges hedging earnings impacts due to costs
- Methodology for determining "market consistent" assumptions

FAS 157 Current Issues

What is the observable period for S&P 500 implied volatility parameters you are currently using as inputs to your valuation models?

- a. 1-3 years
- b. 3-7 years
- c. 7-10 years
- d. 10-15 years
- e. Other (explain briefly)



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Impacts of Recent FSPs

- FAS 157-3: Determining the Fair Value of a Financial Asset When the Market for That Asset is Not Active
 - Generally upholds FAS 157 guidance
 - Clarifies that entity's own assumptions are acceptable when relevant observable inputs are not available
 - Explicitly states that less reliance should be placed on broker quotes that do not reflect market transactions
 - Challenges continue in incorporating and documenting appropriate liquidity premium

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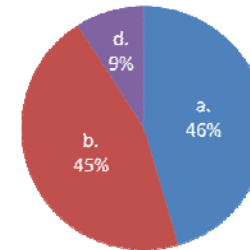
Impacts of Recent FSPs

- FAS 157-4: Determining Fair Value When the Volume and Level of Activity for the Asset or Liability Have Significantly Decreased and Identifying Transactions That Are Not Orderly
 - Identifies factors to consider to determine if volume has significantly decreased
 1. Few recent transactions
 2. Price quotes not based on current information
 3. Price quotes vary substantially
 4. Indexes previously highly correlated are uncorrelated
 5. Significant increase in liquidity premiums, yields, or performance indicators
 6. Wide or significantly increased bid asked spread
 7. Decline/absence of market for new issues
 8. Little public information
 - If volume has significantly decreased, analyze whether specific transactions are orderly – if not, less weight placed on observable transactions
 - Risk premiums to be based on an orderly transaction
 - Additional disclosures, including valuation inputs and changes in techniques

Impacts of Recent FSPs

Do you expect the implementation of FSP SFAS157-4 to have a significant impact on liabilities carried at fair value?

- a. No
- b. Not sure, still assessing the impact
- c. Yes, in looking at the fair value as a whole
- d. Yes, in applying the concepts to individual assumptions used in the valuation
- e. Yes, other (please provide a brief explanation)



Source: Deloitte survey, early 2009

Goodwill Implications

- FSP FAS 157-2 clarified that FAS 157 was deferred for “non financial” items until 2009
 - Includes goodwill and purchase accounting
- Beginning in 2009, fair value for FAS 142 impairment testing must be FAS 157 compliant:
 - Step 1 test: reporting unit fair values must meet FAS 157 criteria
 - Step 2 test: development of “PGAAP” balance sheet must use FAS 157 compliant fair values
 - Step 2 VOBA therefore becomes discounted runoff of risk margin

Goodwill Implications – Super Simple Example

- Three year product
- Hurdle rate: 8%; Risk free rate: 3%; Own credit adjustment: 3%
- Risk margin equals approximately 15% of net cash flow based on results of cost of capital analysis
- “Fair value” liability calculations for FAS 142 Step 2 test:

Year:	PV	1	2	3
Dist Earnings (trad)	\$309	120	120	120
Net Cash Flow (rfr)	\$283	100	100	100
With Credit Adj	\$267			
Risk Margin	\$40	15	15	15
FAS 157 Fair Value	\$307			

Goodwill Implications – Super Simple Example

Carrying Values			
Assets	\$300	Liabilities	\$280
VOBA	\$50	Surplus	\$90
Goodwill	\$20		
	\$370		\$370

Step 2 test involves comparing the carrying value of goodwill to its implied fair value

Equals present value of profits based on actuarial appraisal-type approach and \$309 liability

Fair Values (pre 157)			
Assets	\$270	Liabilities*	\$309
VOBA	\$55		
	\$325		\$309

Implies goodwill write off of \$19
 $\$55 - (\$325 - \$309) - \20

As expected, net result is comparable between the two approaches

*Calculated on prior slide

Based on FAS 157 approach to liability calculation, essentially equals risk margin

Fair Values (post 157)			
Assets	\$270	Liabilities*	\$307
VOBA	\$40		
	\$310		\$307

Implies goodwill write off of \$17
 $\$40 - (\$310 - \$307) - \20

Recent IASB/FASB Guidance – Financial Instruments

Topic	Background	Status
Financial Instruments Classification & measurement	<p>Current working premise is a two classification & measurement category approach:</p> <ol style="list-style-type: none"> 1. Financial instruments with basic loan features managed on contractual yield would qualify for amortized cost measurement 2. All other financial instruments are measured at fair value <p>Additionally, the Board indicated that:</p> <ul style="list-style-type: none"> • The fair value option would be retained (with revised criteria) • Reclassifications between the two categories would be prohibited • The "tainting" rules would be eliminated • Presentation of fair value changes for particular financial instruments in other comprehensive income would be allowed 	<p>Exposure draft issued July 2009</p> <p>Final standard expected in time for 2009 year-end financial statements</p>
Financial Instruments Impairment	<p>Currently discussed approaches to impairment of financial assets under an amortized cost measurement method:</p> <ul style="list-style-type: none"> • Expected loss • Incurred loss • Fair Value <p>Education sessions occurred in June 2009 to discuss the statistical provisioning model and how to operationalize an expected loss approach.</p>	<p>Exposure draft expected by October 2009</p> <p>Final standard expected to be issued in 2010</p>
Financial Instruments Hedge Accounting	<p>Phase 3 of the project to replace IAS 39 addresses hedge accounting. The two approaches being discussed are:</p> <ol style="list-style-type: none"> 1. To eliminate (and possibly replace) existing hedge accounting requirements 2. To maintain and simplify the existing hedge accounting requirements 	<p>Exposure Draft expected in December 2009</p> <p>Final standard expected to be issued in 2010</p>

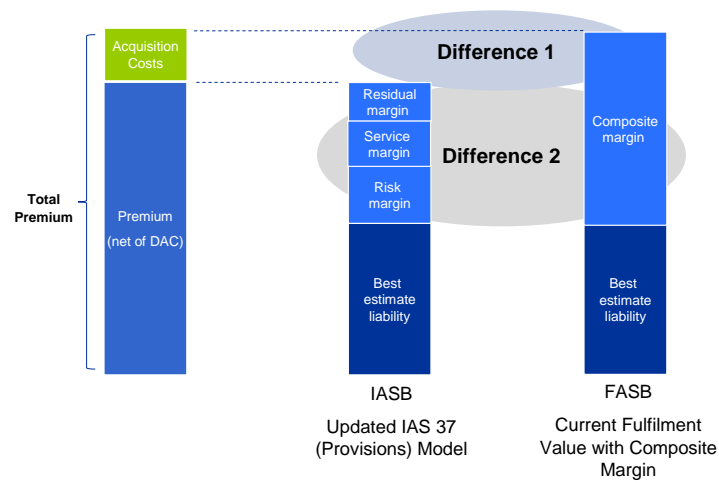
Recent IASB/FASB Guidance – Fair Value Measurements

Topic	Background	Status
Fair Value Measurement	<p>The exposure draft is largely consistent with SFAS 157 and the report published by the IASB's Expert Advisory Panel on measuring fair value in inactive markets.</p> <p>The basic concepts are:</p> <ul style="list-style-type: none"> •Exit price notion •Most advantageous market •Identification of unit of account •Maximizing observable inputs •Consideration of non-performance risk •Highest and best use •Level hierarchy •Valuation techniques 	<p>Exposure Draft was issued in May 2009</p> <p>Comments are due September 28, 2009</p> <p>Final Standard is expected to be issued in 2010</p>
Fair Value Disclosures	<p>The objective of the project was to enhance disclosures about valuations, methodologies, the uncertainty around fair value measurements, and the nature and extent of liquidity risk.</p> <p>In addition to the disclosure requirements under SFAS 157, the amendment to IFRS 7 also requires the disclosure of</p> <ul style="list-style-type: none"> •Significant transfers between level 1 and level 2 and the reasons for those transfers •The effect of a change of one or more inputs to reasonably possible alternative assumptions for fair value measurements in level 3, if such a change would change fair value significantly 	<p>Final standard was issued in March 2009</p>

Recent IASB/FASB Guidance – Insurance Contracts

- Joint meeting in July
- Agreement on the following:
 - Three building blocks will be used (first two – cash flows and discount rate – hold consistent view)
 - Immediate loss through income if premium insufficient
- Two key differences of opinion:
 - Treatment of acquisition costs
 - Treatment of block 3 (margins)

Recent IASB/FASB Guidance



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