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**US GAAP for International Life Insurers – Hong Kong
June 2008**

Session 12: Fair Value (SFAS 157/159) and IFRS

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SFAS 157: Fair Value Measurement **Actuaries** Risk Is Opportunity.™

Applies to any asset or liability where fair value measurement is already required:

- Certain Invested Assets (Trading Assets, Available-For-Sale Assets) under SFAS 115
- Freestanding Derivatives
- Certain Embedded Derivatives (GMAB, GMWB, certain reinsurance features)
- PGAAP Balance Sheet Including Intangible Assets (Initial Valuation, Impairment Values)
- Separate Accounts
- SFAS 107 Disclosures
 - SA liabilities
 - Mortgage loans
 - Debt



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Fair Value Measurement - New Definition and Framework for “Fair Value”

- Exit price vs. entry (transaction) price
“The price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date.”
- Market-based assumptions vs. entity specific
- Clarifies that market participant assumptions include assumptions about risk
- Liability measurement includes nonperformance risk
- Establishes a fair value hierarchy based on observable and unobservable inputs
- Blockage factors excluded for trades in active markets
- Transaction costs excluded from FVM



Fair Value Hierarchy

- Level 1: Quoted prices in active markets for identical assets or liabilities
- Level 2: Inputs other than quoted prices that are directly or indirectly observable
 - Quoted prices for similar assets or liabilities
 - Quoted prices from non-active market
 - Observable inputs such as Treasury yields & credit spreads
 - Market corroborated inputs
- Level 3: Unobservable inputs
 - Entity’s assumption of the assumptions that market participants would use to determine price
 - Significant disclosure requirements



Fair Value Measurement - Hierarchy Table Example



March 31 2008				
Fair Value Measurements at Reporting Date Using				
	Quoted Prices in Active Markets for Identical Assets and Liabilities (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)	Total Fair Value
(In millions)				
Assets				
Fixed maturity securities				
U.S. corporate securities	\$ -	\$ 67,988	\$ 8,215	\$ 76,203
Residential mortgage-backed securities	-	54,653	1,866	56,519
Foreign mortgage-backed securities	2	30,159	7,622	37,783
U.S. Treasury/agency securities	5,737	16,288	62	22,087
Commercial mortgage-backed securities	-	18,096	552	18,648
Asset-backed securities	-	7,407	4,171	11,578
Foreign government securities	558	13,878	913	15,349
State and political subdivision securities	8	5,477	137	5,622
Other fixed maturity securities	11	15	273	299
Total fixed maturity securities	6,316	213,961	23,811	244,088
Equity securities				
Common stock	1,965	589	209	2,763
Non-redeemable preferred stock	113	700	1,957	2,770
Total equity securities	2,078	1,289	2,166	5,533
Trading securities	233	396	179	808
Short-term investments	1,348	798	156	2,302
Derivative Assets	14	4,434	1,230	5,678
Net embedded derivatives within asset host contracts	-	-	(144)	(144)
Separate account assets	117,653	33,336	1,581	152,570
Total assets	\$ 127,642	\$ 254,214	\$ 28,979	\$ 410,835
Liabilities				
Derivative liabilities	\$ 20	\$ 3,621	\$ 15	\$ 3,656
Net embedded derivatives within liability host contracts	-	25	1,361	1,386
Trading liabilities	29	-	-	29
Total liabilities	\$ 49	\$ 3,646	\$ 1,376	\$ 5,071



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SFAS 159: Fair Value Option - Basics of the Standard

- Mandatory adoption as of 1/1/08
- Irrevocable election to measure eligible items at fair value through income
- May be applied instrument by instrument, to entire instruments and not portions
- Election made on the date the entity first recognizes the eligible item
- Events that require remeasurement of eligible items at fair value (e.g. Purchase GAAP) also create an election date
- The effect of the first remeasurement to fair value (for existing items) reported as a cumulative-effect adjustment to the opening balance of retained earnings



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Example SFAS 159

Applications for Insurance

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- GMDBs and GMIBs with economic hedges
 - Improves matching of claims costs and hedge gains as compared to current accounting (SOP 03-1)
 - Issue is fair value of future fees
- Contracts with loss recognition concerns
 - If currently in LR, enables upside recognition
 - If potential future LR, can take now through OCI
 - Issue is disclosure of reason for applying 159 (cannot be to avoid current impairment)
- Contracts not getting SA treatment under SOP 03-1
 - Liabilities equal fair value of assets
 - If assets not trading, can apply FVO to get asset/liability match



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Changes for GMxBs under FAS 157

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- Risk margins
- Own credit standing



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Letter of the Law on Risk Margins

- “*unobservable inputs shall reflect the reporting entity’s own assumptions about the assumptions that market participants would use in pricing the asset or liability (including assumptions about risk).*”



SO.....

- Non-market observable assumptions should include margin
- Margin should be what a *market participant* would add in
- Market observable assumptions/prices already include risk margin (no need to add)



Classification of Inputs*

Input	Level	Risk Margin?	Significance
Swap curve	2	No	High
Short term volatility	2	No	High
Long term volatility	3	Yes	High
Correlation	2	No	High
Behavior	3	Yes	High
Mortality	3	Yes	Low
Expenses	3	Yes	Low

* Representative list for insurance contracts



Methods for Risk Margin

- Cost of capital
- Quantile
- Explicit PAD
- Discount rate adjustment
- Calibration to market data



Cost of Capital

- Consistent with actuarial appraisal method
- Probably best theoretically if principal market is insurer market
- Challenge is complexity



Quantile

- Relatively simple application
- Does not work within a risk neutral framework
- Challenge is setting quantile level



Explicit PAD

- Easier than cost of capital with some of the benefits
- Challenge is determining appropriate PADs, particularly when directional impact on result is not intuitive



Discount Rate Adjustment

- Relatively simple application
- Does not work within a risk neutral framework
- Challenge is setting level of adjustment



Calibration

- Not mentioned in IAA paper
- Involves “calibrating” risk margin so that result ties to market data (quotes or deal prices)
- Favored by SEC, particularly when there is significant capital markets risk and public data



Industry Practice

- Significant interest in CoC, but often disregarded due to complexity
- Explicit PAD very common
- Where quantile, discount rate, or calibration are used is typically in conjunction with another method



“Own Credit” Adjustment

- Paragraph 15 of FAS 157 states
“...**Nonperformance risk includes but may not be limited to the reporting entity’s own credit risk. The reporting entity shall consider the effect of its credit risk (credit standing) on the fair value of the liability in all periods in which the liability is measured at fair value. ...**”



“Own Credit” Adjustment (continued)

Reflecting “Own Credit” Risk

- In theory, reflect probabilities of default by scenario
- In practice, handle via discount rate
- Choose representative risk rate/spread
- Adjustment applied to liabilities, but not assets



Fair Value: Simple Application

- Block of VAs with GMWBs (FAS 133)
- Current FAS 133 valuation implies 40 bps of AV
- Current real world valuation implies 30 bps of AV
- Current reinsurance quote implies 80 bps of AV
- Recent acquisition implies 60 bps of AV

What is the appropriate approach for fair value?



Application (cont'd)

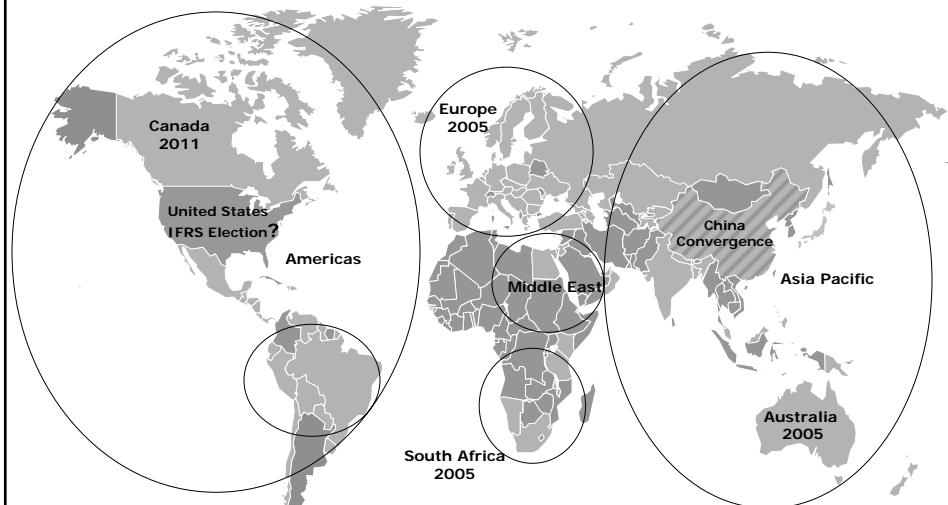
Method	Advantages	Disadvantages
Market Approach - Reinsurance	Level 2 inputs preferred Relatively easy	Reliability of market Not a full transfer Potentially volatile
Market Approach – M&A	Level 2 inputs preferred More consistent with internal view	Reliability of market Challenging to get market price just for GWMB Exposures different
Cost Approach – Simulated hedging	Level 2 inputs preferred Consistent with hedging	Complex & time consuming Model risk
Income Approach – Risk Neutral	Least change from current Able to isolate GMWB	Level 3 inputs Subjective Inconsistency with “market”
Income Approach – Real World	Consistent with capital and M&A approaches Able to isolate GMWB	Level 3 inputs Subjective Inconsistency with “market”



The World is Moving toward IFRS

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■ Current or anticipated requirement or permission to use of IFRS



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Discussion Paper on Insurance Contracts

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- In May 2007, the IASB issued a Discussion Paper (DP), *Preliminary Views on Insurance Contracts*, addressing new model for accounting for insurance contracts.
 - Describes three building blocks to be considered in the valuation of insurance contracts:
 - time value of money
 - discounting
 - risk and service margins
- In August, 2007, the FASB issued an Invitation to Comment (ITC)
 - contains additional questions including whether a new comprehensive U.S. GAAP accounting standard for insurance contracts and policyholder accounting guidance is needed.
 - Requests views on how a project on insurance contracts should interact with other FASB projects such as conceptual framework, revenue recognition and financial statement presentation.
 - Also Asks whether the FASB should undertake a project jointly with the IASB.



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Discussion Paper on Insurance Contracts

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- The American Academy of Actuaries (AAA), GNAIE and the ACLI each issued comment letters to the IASB. In addition, GNAIE and ACLI issued comment letters to the FASB on the wrapper as well.
- The comments ranged from:
 - requests for separate standard setting projects for life, non-life and reinsurance contracts
 - the controversy in recognizing gain/loss at the inception of a contract
 - Premature consideration on issues without conclusion on other standard setting projects (e.g. revenue recognition, assets and liabilities and de-recognition of assets and liabilities).
 - Using Earned Rate vs Risk Free Rate in Discounting of Liabilities
- Currently the IASB and FASB are in the process of analyzing all of the comment letters.



Appendix B: Agenda – IFRS Convergence Where are we with IFRS 4?

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Phase I – March 2004

- Interim Standard dealing with *insurance contracts*
 - If insurance contract \Rightarrow Local GAAP
 - If contract with DPF \Rightarrow Local GAAP
 - If investment contract \Rightarrow IAS 39
- Elimination of equalisation / CAT reserves
- Liability adequacy test
- Gross reporting of reinsurance
- Impairment of reinsurance assets
- May require unbundling insurance and investment elements
- Extensive disclosure requirements



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Phase II - Overview

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- Single measurement model
 - Life, P&C, Health, Reinsurance
- Exit value model
 - Amount to sell entire obligation to 3rd party
- Prospective valuation
 - Current estimates of future cash flow
 - Probability-weighted and unbiased



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Phase II – Measurement 3 Building Blocks

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Estimates of future cash flows

Explicit and Current
Unbiased and probability weighted
Consistent with observable “market” price

Discounting

Adjust future cash flows for the time value of money

Margins

Risk Margin: The possibility of surprise in cash flows
Service Margin: The amount for servicing the contract



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Phase II – Cash Flows

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- The cashflows should incorporate the explicit, current (balance sheet date) view for the future cashflows
 - Market factors need to be updated each period
- Unbiased cashflows
 - The cashflows should be the sum of all probability weighted risk neutral cash flow scenarios.
 - The element of surprise should be considered in determining the risk margin, rather than by creating additional cash flow scenarios.
- The cashflows should be „market consistent“ rather than „entity specific“
- Insurers should measure actual contractual rights and obligations



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Phase II – Discount rates

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- The rate should be consistent with observable market rates for cash flows whose characteristics match those of the insurance liability in terms of 1) timing, 2) currency and 3) liquidity
- The rate should be adjusted to exclude any factors that influence the observed rate but are not relevant to the liability (e.g. risks that are not present in the liability but are present in the instrument used as a benchmark).



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Phase II – Margins

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- 2 Margins – Risk Margin and Service Margin
- The objective of a Risk margin
 - convey decision-useful information to users about the uncertainty associated with future cash flows not to provide a shock absorber for the unexpected
- The objective of a Service margin
 - A margin that market participants would demand for servicing the specific contracts



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Issues Raised

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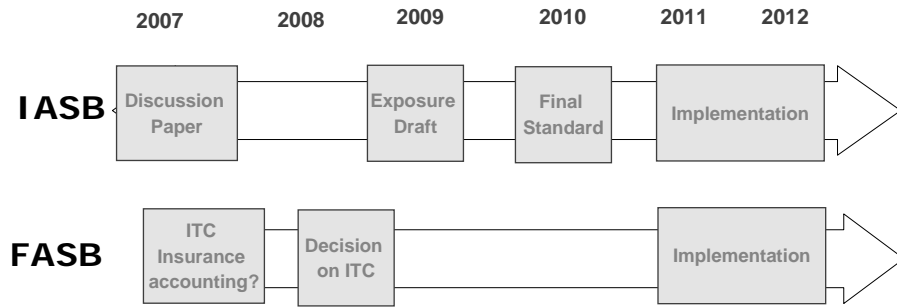
- Exit value premise: Most disagree, despite FAS 157 and Solvency II
- Basic building blocks: Acceptance of concept but disagreement on details
- Market data required: Availability
- Discount rate: Earned versus market consistent, “own credit” reflection
- Methodology for risk margins: Comparable questions as for FAS 157
- Cash flow inclusion: Nearly unanimous disagreement on renewal premiums
- Unbundling: Most disagree-exception if no relationship among components



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Phase II Timeline

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If FASB decides on joint project = US GAAP and IFRS identical for insurance contracts



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