Fair Value – Introduction and Implementation Issues

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Brief Agenda

• Introduction to FV standards
  – FAS 157
  – IFRS Phase II Paper

• Implementing Fair Value
  – Implementation Issues
  – Simple Example

• Sample Applications of fair value option
Recent Fair Value Accounting Pronouncements - USGAAP

<table>
<thead>
<tr>
<th>SFAS 155</th>
<th>SFAS 157</th>
<th>SFAS 159</th>
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| • Fair Value Measurement Election  
  – Permits irrevocable fair value measurement for any hybrid financial instrument that contains an embedded derivative that would have required bifurcation  
  – Eliminates temporary exemption for beneficial interests in securitized financial assets from the bifurcation requirements of SFAS 133 (DIG D1)  | • Applies to accounting pronouncements that require or permit fair value measurements  
  – Does not apply to share based payments under SFAS 123  
  • Presents a comprehensive definition of fair value  
  – Hierarchy for valuation inputs  
  – Transaction vs. exit price  
  – Requires explicit risk margin  
  – Eliminates use of blockage factors for quoted prices (level 1)  
  – Requires consideration of the issuer’s own credit  
  – Eliminates deferral of unrealized gains/losses on day 1 (EITF 02-3)  | • Under the issued standard, a company may (at inception of the contract) irrevocably elect fair value as the initial and subsequent measurement attribute for certain financial assets and liabilities on a contract by contract basis. Benefits include:  
  – Moves away from problems of the “mixed-attribute model”  
  – Mitigates volatility without complex hedge accounting  
  – Achieves greater convergence with international accounting standards  
  – Expands the use of fair value measurement attribute  
  Note: Phase 2: Will address creating a FVO for selected non-financial items. |

SFAS 157: Fair Value Hierarchy

• Standard establishes a three-level hierarchy:  
  – Level 1 – quoted price; in active markets for identical assets or liabilities.  
  – Level 2 – indirect observable; inputs are directly or indirectly observable inputs (other than quoted prices included in Level 1),  
  – Level 3 – Are unobservable; Reflect the entity’s own assumptions about assumptions that market participants would use, including assumptions about risk (for example, due to unobservability).  

A fair value measurement is categorized within the hierarchy based on the lowest-level input that has a significant effect on the measurement.
IFRS – Phase II Paper

• To address the accounting for insurance contracts under IFRS (currently defaults to local GAAP)

• Generally similar to FAS 157

• Uses current exit value premise
  – Current estimates; not entity specific
  – Discounted at current rates
  – Explicit, unbiased risk margin
  – Explicit, market-based service margin

IFRS: Some Differences from FAS 157

• Bid/asked versus mid pricing

• Exclusion of future premiums unless required or to guarantee insurability

• Explicit requirement for probability-weighted scenarios

• No explicit hierarchy for inputs

• Explicit service margin

• More guidance on risk margin; held at portfolio level

• Unbundling
Implementing Fair Value

• Establish a project approach for implementation

• Include subject matter expertise from across the organization; Accounting Policy Group, Consolidation, Actuarial Group, Investment Group, etc.,

• Break the effort down into phases

• Establish deadlines for consideration and evaluation of the impact on each class of products.

• Set priorities for system enhancements to support changes to the accounting and required disclosures.

Fair Value: Implementation Issues

• Bid/Mid/Ask Pricing
  – USGAAP: No requirement to mark Long to bid and short to ask; different from common industry practice and IAS rule

• USGAAP Block Discounts
  – Not permitted for Level 1
  – Not permitted for Level 1 priced using the practical expedient
  – Permitted for Level 2 or 3
Fair Value: Implementation Issues

• Consideration of Credit Enhancements (e.g. collateral)
  – Should fair value changes of on and off-balance sheet collateral be considered?
  – Adjust the valuation of assets and liabilities for collateral and other credit enhancements
  – Market participant assumptions

• Credit adjustments for Liabilities at fair value
  – Includes two-way credit adjustments for derivative contracts

Fair Value: Implementation Issues

• Determining valuation method(s)
  – Lack of reliable market prices
  – Requirement to follow hierarchy

• Setting “market” assumptions

• Bridging gap between PV techniques and market prices (day one and ongoing)

• Treatment of gain/loss at issue and ongoing volatility

• Complexity of modeling

• Communicating results to management

• Incorporating adequate controls
Fair Value: Implementation Issues

- USGAAP treatment of “Service Contracts”
- IFRS treatment of future premiums
- IFRS extent of and method for use of probability-weighted scenarios
- Method for incorporating risk margins
- Required frequency of “level 3” assumption updates
- Treatment of differences between USGAAP and IFRS fair value
- Disclosure requirements

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?
### Fair Value: Simple Application (cont’d)

<table>
<thead>
<tr>
<th>Method</th>
<th>Advantages</th>
<th>Disadvantages</th>
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<tbody>
<tr>
<td>Market Approach - Reinsurance</td>
<td>Level 2 inputs preferred&lt;br&gt;Relatively easy</td>
<td>Reliability of market&lt;br&gt;Not a full transfer&lt;br&gt;Potentially volatile</td>
</tr>
<tr>
<td>Market Approach – M&amp;A</td>
<td>Level 2 inputs preferred&lt;br&gt;More consistent with internal view</td>
<td>Reliability of market&lt;br&gt;Challenging to get market price just for GWMB&lt;br&gt;Exposures different</td>
</tr>
<tr>
<td>Cost Approach – Simulated hedging</td>
<td>Level 2 inputs preferred&lt;br&gt;Consistent with hedging</td>
<td>Complex &amp; time consuming&lt;br&gt;Model risk</td>
</tr>
<tr>
<td>Income Approach – Risk Neutral</td>
<td>Least change from current&lt;br&gt;Able to isolate GMWB</td>
<td>Level 3 inputs&lt;br&gt;Subjective&lt;br&gt;Inconsistency with “market”</td>
</tr>
<tr>
<td>Income Approach – Real World</td>
<td>Consistent with capital and M&amp;A approaches&lt;br&gt;Able to isolate GMWB</td>
<td>Level 3 inputs&lt;br&gt;Subjective&lt;br&gt;Inconsistency with “market”</td>
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### Fair Value: Operational/Model Issues

- **Fair Value methodology**
  - Design and approval
  - Documentation (Valuation technique a required disclosure item)

- **Valuation models and tools**
  - Development or acquisition
  - Implementation
  - Documentation
  - Validation

- **Valuation process**
  - Design and documentation of process and procedures
  - Production of F/S values and required disclosure items
  - Integration with overall Fair Value implementation project
Example SFAS 159 Applications for Insurance

• 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
International Financial Reporting Standards

Larry H. Rubin, Partner
PricewaterhouseCoopers

Agenda

• What is this and why should I care
• Recent IFRS Discussion Paper (DP)
• IFRS Building Blocks
• What is Risk Margin
• Underlying Questions
• Clearer Answers
• Numerical Examples
• Historical Perspective
• Performance Measurement
• Risk and Capital Measurement
Recent Events Foreshadowing Changes to Financial Reporting

- IFRS DP Released May 2007
- SEC proposed rule released July 2007 regarding reconciliation to US GAAP
- SEC US issuer concept released July 2007
- FASB wrapper released August 2007
- **ALSO**
  - NAIC part of IAIS
  - FASB part of IASB

IFRS DP On Valuing Insurance

Accounting model for Insurance contracts

- “Current exit value” (implementation B)
  - A prospective, market-consistent view
  - Based on the amount an insurer would expect to pay another entity to take on the rights and obligations of the contracts
- **Controversial**
  - Some believe that it is not practical to achieve without a reliable market
- **Alternative (implementation A)**
  - A prospective, market-consistent view
  - Based on the price of the transaction
Implications of exit value approach

• Could result in gain or loss at inception
  – Inconsistent with many current accounting approaches

• For contracts that are under-priced in relation to the hypothetical market
  – Net losses are recognized immediately

• For components of life insurance contracts where there is no readily observable market
  – Mark-to-model, requiring judgment

Building blocks for Current Exit Value

The IASB proposal is to construct a current exit value (CEV) using three building blocks

1. An explicit, market consistent, unbiased, probability weighted, current estimate of future cash flows
2. Discount rate(s) based on market-based interest rates to apply to the cash flows
3. An explicit and unbiased estimate of a margin that another party would require to bear risk (risk margin) and to provide services (service margin), if any
Third building block: Risk margin

- Based on an estimate of what a third party would require to assume the risk
- Premiums charged to policyholders provide a checkpoint in assessing risk margins
- Possibly most controversial element
- Risk margin is portfolio rather than entity-specific
  - Reflects the pooling of contracts within a portfolio, but not diversification or negative correlation benefits across portfolios
  - Theoretically, does not reflect diversifiable or financial risk
- The IASB does not propose to prescribe a specific method for developing risk margins
- Alternative: calibrate to original transaction price

Risk Margin is …

- Typical Insurance view -- Risk Margin is to provide for variance or volatility around the expected value of loss i.e. liability
- Proposed IFRS view -- the margin needed to bear the risk i.e. compensation on capital
- FAS157 -- price for bearing the uncertainty inherent in the cash flows
- Is there a difference?
  - Definitely!!
IFRS Risk Margin approaches

• Mentioned in the DP and Appendices
  – Confidence levels
  – Conditional Tail Expectations
  – Explicit margin within a range
  – Cost of Capital
  – CAPM or asset pricing models
  – Adjustment to cash flows
  – Multiples of probability distribution parameter
  – Risk adjusted discount rate

• All relate to building block 3 – Not to Cash Flows

Underlying Questions

• Is Risk Margin based on
  – the contract ?
  – a “risk” ?
  – capital invested ?

• What are Earnings ?
  – More than cost of capital ?
  – Is this a relevant measure ?
  – Does either GAAP or IFRS present better measurement ?

• Basis for economic decision ?
  – Value against other investments easily ?
  – Comparable against other insurers ?
Earnings

- IFRS would have earnings equal to the release of the risk margin and...
- would capture the gain or loss above the risk margin at issue (or acquisition)
- would reflect impact of change in future expectations immediately

- GAAP reports earnings as a percent of premium or profits… with adjustments
- would reflect impact of change in future expectations ratably (or ignore)

Clearer Answers ??

Under the IFRS proposal:
- At issue or acquisition, the value of the business is estimated
- Estimate is revised each reporting period
  - Will companies track each cohort?
- Using the Cost of Capital approach
  - Amount of capital invested or tied up known
  - Return on capital in the period will be known
Cost of Capital Approach

One method discussed in the IFRS DP

- Return needed from the market for the next dollar of capital
- Capital based on economic capital or required capital

An investor’s view?

- What is economic capital/What is cost of capital
- How credible are internal models
- Why do internal models not reproduce what is observable in the marketplace

Numerical Thoughts

• It appears that a wide variety of results may appear even using the same methodology
Risk margin: Term example

Risk margin: UL example
Risk margin: UL example

IFRS reflects the future cash flow change once known while US GAAP recognizes a portion

Historical Perspective

- Will profits emerge as a level proportion of the drivers?
- Will the capital or risk margin produce smooth results?
- Will the market changes mask results?
- How much volatility is introduced?
- Are we returning to “net” premiums plus loads?
Performance Measurement

Considerations
- Profit at issue recognized
- Emergence over time (release from risk)
- Modeling or Pricing Error
- Impact of assumption changes
- Market changes

If the objective is to signal to the investment community what to expect does it matter
- If Risk margin is determined by internal model then a company earning more then its cost of capital will have a gain at issue
- If Risk margin is calibrated to premium then the risk margin will be greater then the internal model cost of capital
Risk and Capital Management

• How will diversification impact be reflected?
• How will enterprise risk and capital management practices be affected?
• Given the sub prime market meltdown, how much credibility do internal models have?
• Theoretically Fair Value should value the change in risk margins into current value. Does this provide any value to the user of the statement? Does the impact of changes in other non-investment assumptions add value to the user?