2020 VIRTUAL ANNUAL MEETING & EXHIBIT

OCTOBER 26–29, 2020
IFRS 17
A Global Standard With Local Impact

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Jodie Carlson, FSA, MAAA, CERA
Angela Schwendeman, FSA, MAAA
Darryl Wagner, FSA, MAAA

October 29, 2020
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- Do not discuss what you or other entities plan to do in a particular geographic or product markets or with particular customers.
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- Do leave a meeting where any anticompetitive pricing or market allocation discussion occurs.
- Do alert SOA staff and/or legal counsel to any concerning discussions
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Introducing the Speakers

Jodie Carlson
- Jodie is a Director at Transamerica and currently leads the IFRS 17 US project team, with prior experience in Risk Management, market consistent valuation, and experience studies
- She is a Fellow of the Society of Actuaries, Chartered Enterprise Risk Analyst, and Member of the American Academy of Actuaries

Angie Schwendeman
- Angie is a Director at Transamerica and currently leads the Finance/IFRS 17 Modernization Project team, with prior experience in actuarial modeling and valuation
- She is a Fellow of the Society of Actuaries and Member of the American Academy of Actuaries

continues on next slide
Introducing the Speakers

Darryl Wagner
• Darryl is a principal at Deloitte Consulting who leads Deloitte's Global Actuarial & Insurance Solutions practice
• Darryl's areas of specialty include life insurer financial reporting and performance and value measurement and management. He has worked on numerous accounting and valuation frameworks for clients around the world, helping with technical, process-oriented, and organizational aspects of implementation, execution, and evaluation, including US GAAP and statutory reporting, Solvency II, Embedded Value and IFRS 17 for global insurers

Carlos Arocha
• Carlos is a Managing Partner at Arocha & Associates, in Zurich
• Carlos has more than 25 years of global expertise in life and P&C re/insurance: quantitative risk modeling, IFRS 17, risk-based capital, Solvency II, Swiss Solvency Test and valuation of insurance reserves ALM, and Enterprise Risk Management
• Lecturer, Master in Actuarial Science Program, Columbia University
• He is a Fellow of the Society of Actuaries and a Member of the Swiss Association of Actuaries
Agenda

• Background and Accounting Model  Carlos Arocha
  • IFRS 4 vs. IFRS 17

• Implementation Challenges  Jodie Carlson
  Angie Schwendeman

• Alignment with Long Duration Targeted Improvements (“LDTI”)  Darryl Wagner
  • Actuary as a Business Advisor
What is your level of expertise on IFRS 17?

A. Expert level! I’m currently involved in helping my company to implement the new standard

B. I have some background on the standard, but am not currently involved in the implementation efforts at my company

C. I know a little about IFRS 17, but it doesn’t apply to my company

D. This is all brand new to me!
Background and Accounting Model
Why has IFRS 17 been issued?

IFRS 4

• Interim standard that allowed insurers to use local rules to measure insurance contracts
• No unique way to accounting
• Difficult to differentiate between profitable and non-profitable contracts

IFRS 17

• First comprehensive global accounting standard for insurance

• Requirements
  – information based on current estimates
  – updated information about obligations, performance and risks
  – increase transparency
  – consistent measurement of insurance contracts
IFRS 17 Landscape

Definition and scope | Separation of components

**General Measurement Model (GMM)**

- Contractual service margin
- Adjustment for non-financial risk
- Discount rates
- Expected value of fulfilment cash flows

**Premium Allocation Approach (PAA)**

- Liability for remaining coverage
  - Adjustment for non-financial risk
  - Discount rates
  - Expected value of fulfilment cash flows

**Variable Fee Approach**

- Presentation and disaggregation
- Reinsurance held
- Transition rules
- Disclosure

See Appendix I for details
## Implications of IFRS 17

<table>
<thead>
<tr>
<th>Category</th>
<th>Implications</th>
</tr>
</thead>
<tbody>
<tr>
<td>Comparability</td>
<td>• International standard</td>
</tr>
<tr>
<td></td>
<td>• Currently, IFRS 4 allows the use of local reporting standards</td>
</tr>
<tr>
<td></td>
<td>• Better comparability is expected (particularly for insurance groups)</td>
</tr>
<tr>
<td>Cash and dividends</td>
<td>• Expected mismatches between IFRS 17 (economic perspective) and statutory</td>
</tr>
<tr>
<td></td>
<td>accounting (historical perspective)</td>
</tr>
<tr>
<td></td>
<td>• Shareholder dividends are usually determined based on statutory accounting</td>
</tr>
<tr>
<td>Economic valuation</td>
<td>• IFRS 17 aligned with Solvency II and economic capital</td>
</tr>
<tr>
<td></td>
<td>• May create volatility</td>
</tr>
<tr>
<td></td>
<td>• Required reconciliations may be more intuitive</td>
</tr>
<tr>
<td>Profit</td>
<td>• More transparency expected</td>
</tr>
<tr>
<td></td>
<td>• Better insight into profit sources</td>
</tr>
<tr>
<td></td>
<td>• More scrutiny regarding the amortization of the CSM</td>
</tr>
</tbody>
</table>
## Key Features of IFRS 17

<table>
<thead>
<tr>
<th>Feature</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Dynamism</strong></td>
<td>• <strong>Fulfilment cash flows</strong> (FCF) estimates and assumptions updated at each reporting</td>
</tr>
<tr>
<td><strong>Time-value of money</strong></td>
<td>• FCF’s reflect the time value of money</td>
</tr>
<tr>
<td><strong>Market-consistency</strong></td>
<td>• FCF’s estimates use all available market information</td>
</tr>
<tr>
<td><strong>Risk</strong></td>
<td>• Periodic reassessment of risk margins</td>
</tr>
<tr>
<td><strong>Deferral of profit on initial recognition</strong></td>
<td>• On initial recognition, profit is deferred and aggregated in groups of insurance contracts</td>
</tr>
<tr>
<td><strong>Adjustments to expected profit</strong></td>
<td>• Expected profit recognized over coverage period after adjusting for changes in assumptions in FCF’s</td>
</tr>
</tbody>
</table>
IFRS 4 vs. IFRS 17
# Illustrative Example

Term life insurance—product cash flows

<table>
<thead>
<tr>
<th></th>
<th>year 1</th>
<th>year 2</th>
<th>year 3</th>
<th>year 4</th>
<th>year 5</th>
<th>year 6</th>
<th>year 7</th>
<th>year 8</th>
<th>year 9</th>
<th>year 10</th>
</tr>
</thead>
<tbody>
<tr>
<td>Opening balance</td>
<td>0</td>
<td>16,700</td>
<td>31,092</td>
<td>43,107</td>
<td>52,673</td>
<td>59,686</td>
<td>64,070</td>
<td>65,745</td>
<td>64,600</td>
<td>60,550</td>
</tr>
<tr>
<td>Premiums</td>
<td>100,000</td>
<td>99,667</td>
<td>99,333</td>
<td>99,000</td>
<td>98,633</td>
<td>98,267</td>
<td>97,900</td>
<td>97,500</td>
<td>97,100</td>
<td>96,700</td>
</tr>
<tr>
<td>Death benefits</td>
<td>-75,000</td>
<td>-77,500</td>
<td>-80,000</td>
<td>-82,500</td>
<td>-85,000</td>
<td>-87,500</td>
<td>-90,000</td>
<td>-92,500</td>
<td>-95,000</td>
<td>-97,500</td>
</tr>
<tr>
<td>Commissions</td>
<td>-10,000</td>
<td>-9,967</td>
<td>-9,933</td>
<td>-9,900</td>
<td>-9,863</td>
<td>-9,827</td>
<td>-9,790</td>
<td>-9,750</td>
<td>-9,710</td>
<td>-9,670</td>
</tr>
<tr>
<td>Other expenses</td>
<td>-1,000</td>
<td>-1,000</td>
<td>-1,000</td>
<td>-1,000</td>
<td>-1,000</td>
<td>-1,000</td>
<td>-1,000</td>
<td>-1,000</td>
<td>-1,000</td>
<td>-1,000</td>
</tr>
<tr>
<td>Investment income</td>
<td>2,700</td>
<td>3,192</td>
<td>3,615</td>
<td>3,966</td>
<td>4,243</td>
<td>4,444</td>
<td>4,565</td>
<td>4,605</td>
<td>4,560</td>
<td>4,427</td>
</tr>
<tr>
<td>Closing balance</td>
<td>16,700</td>
<td>31,092</td>
<td>43,107</td>
<td>52,673</td>
<td>59,686</td>
<td>64,070</td>
<td>65,745</td>
<td>64,600</td>
<td>60,550</td>
<td>53,507</td>
</tr>
</tbody>
</table>

See Appendix II for details
### Illustrative Example

**Statement of comprehensive income (IFRS 4)**

<table>
<thead>
<tr>
<th></th>
<th>year 1</th>
<th>year 2</th>
<th>year 3</th>
<th>year 4</th>
<th>year 5</th>
<th>year 6</th>
<th>year 7</th>
<th>year 8</th>
<th>year 9</th>
<th>year 10</th>
</tr>
</thead>
<tbody>
<tr>
<td>Premiums</td>
<td>100,000</td>
<td>99,667</td>
<td>99,333</td>
<td>99,000</td>
<td>98,633</td>
<td>98,267</td>
<td>97,900</td>
<td>97,500</td>
<td>97,100</td>
<td>96,700</td>
</tr>
<tr>
<td>Investment income</td>
<td>2,700</td>
<td>3,192</td>
<td>3,615</td>
<td>3,966</td>
<td>4,243</td>
<td>4,444</td>
<td>4,565</td>
<td>4,605</td>
<td>4,560</td>
<td>4,427</td>
</tr>
<tr>
<td>Incurred claims</td>
<td>-75,000</td>
<td>-77,500</td>
<td>-80,000</td>
<td>-82,500</td>
<td>-85,000</td>
<td>-87,500</td>
<td>-90,000</td>
<td>-92,500</td>
<td>-95,000</td>
<td>-97,500</td>
</tr>
<tr>
<td>Change in insurance liabilities</td>
<td>-28,523</td>
<td>-8,661</td>
<td>-5,895</td>
<td>-3,059</td>
<td>-123</td>
<td>2,887</td>
<td>5,973</td>
<td>9,166</td>
<td>12,439</td>
<td>15,794</td>
</tr>
<tr>
<td>Acquisition costs</td>
<td>-10,000</td>
<td>-9,967</td>
<td>-9,933</td>
<td>-9,900</td>
<td>-9,863</td>
<td>-9,827</td>
<td>-9,790</td>
<td>-9,750</td>
<td>-9,710</td>
<td>-9,670</td>
</tr>
<tr>
<td>Other expenses</td>
<td>-1,000</td>
<td>-1,000</td>
<td>-1,000</td>
<td>-1,000</td>
<td>-1,000</td>
<td>-1,000</td>
<td>-1,000</td>
<td>-1,000</td>
<td>-1,000</td>
<td>-1,000</td>
</tr>
<tr>
<td>Profit or loss</td>
<td>-11,823</td>
<td>5,731</td>
<td>6,120</td>
<td>6,507</td>
<td>6,891</td>
<td>7,271</td>
<td>7,648</td>
<td>8,021</td>
<td>8,389</td>
<td>8,752</td>
</tr>
<tr>
<td>Other comprehensive income</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Comprehensive income</td>
<td>-11,823</td>
<td>5,731</td>
<td>6,120</td>
<td>6,507</td>
<td>6,891</td>
<td>7,271</td>
<td>7,648</td>
<td>8,021</td>
<td>8,389</td>
<td>8,752</td>
</tr>
</tbody>
</table>

1. There is no unique IFRS 4 methodology, as it conforms to local accounting rules.
## Illustrative Example

### Statement of comprehensive income (IFRS 17)

<table>
<thead>
<tr>
<th></th>
<th>year 1</th>
<th>year 2</th>
<th>year 3</th>
<th>year 4</th>
<th>year 5</th>
<th>year 6</th>
<th>year 7</th>
<th>year 8</th>
<th>year 9</th>
<th>year 10</th>
</tr>
</thead>
<tbody>
<tr>
<td>Insurance revenue</td>
<td>88,982</td>
<td>91,642</td>
<td>94,303</td>
<td>96,964</td>
<td>99,624</td>
<td>102,283</td>
<td>104,944</td>
<td>107,603</td>
<td>110,263</td>
<td>112,924</td>
</tr>
<tr>
<td>Incurred claims and expenses</td>
<td>-76,000</td>
<td>-78,500</td>
<td>-81,000</td>
<td>-83,500</td>
<td>-86,000</td>
<td>-88,500</td>
<td>-91,000</td>
<td>-93,500</td>
<td>-96,000</td>
<td>-98,500</td>
</tr>
<tr>
<td>Acquisition expenses</td>
<td>-9,820</td>
<td>-9,917</td>
<td>-10,015</td>
<td>-10,112</td>
<td>-10,207</td>
<td>-10,303</td>
<td>-10,398</td>
<td>-10,493</td>
<td>-10,587</td>
<td>-10,682</td>
</tr>
<tr>
<td>Insurance service result</td>
<td>3,162</td>
<td>3,225</td>
<td>3,288</td>
<td>3,352</td>
<td>3,416</td>
<td>3,481</td>
<td>3,546</td>
<td>3,611</td>
<td>3,676</td>
<td>3,742</td>
</tr>
<tr>
<td>Investment income</td>
<td>2,700</td>
<td>3,192</td>
<td>3,615</td>
<td>3,966</td>
<td>4,243</td>
<td>4,444</td>
<td>4,565</td>
<td>4,605</td>
<td>4,560</td>
<td>4,427</td>
</tr>
<tr>
<td>Net financial result</td>
<td>1,094</td>
<td>1,326</td>
<td>1,540</td>
<td>1,736</td>
<td>1,911</td>
<td>2,066</td>
<td>2,197</td>
<td>2,305</td>
<td>2,388</td>
<td>2,444</td>
</tr>
<tr>
<td>Profit or loss</td>
<td>4,256</td>
<td>4,551</td>
<td>4,829</td>
<td>5,088</td>
<td>5,328</td>
<td>5,546</td>
<td>5,743</td>
<td>5,916</td>
<td>6,064</td>
<td>6,186</td>
</tr>
<tr>
<td>Other comprehensive income</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Comprehensive income</td>
<td>4,256</td>
<td>4,551</td>
<td>4,829</td>
<td>5,088</td>
<td>5,328</td>
<td>5,546</td>
<td>5,743</td>
<td>5,916</td>
<td>6,064</td>
<td>6,186</td>
</tr>
</tbody>
</table>
Effect of changes in estimates

Treatment under IFRS 4

• The full effect of changes is immediately recognized in profit or loss of the year in which estimates change
• Consequently, there is an immediate change in equity

Treatment under IFRS 17

• Changes in estimates are recognized in profit or loss of all future years through changes of CSM in these periods
• Consequently, there is a gradual change in equity
• A breakdown of the insurance contract liability is required to be presented in notes to the financial statements
## Presentation differences

<table>
<thead>
<tr>
<th></th>
<th>IFRS 4</th>
<th>IFRS 17</th>
</tr>
</thead>
<tbody>
<tr>
<td>Insurance contract liabilities</td>
<td>Typically presented separately</td>
<td>No change</td>
</tr>
<tr>
<td>Reinsurance contract assets</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Insurance contract assets</td>
<td>Netted with insurance contract liabilities</td>
<td>Presented separately</td>
</tr>
<tr>
<td>Reinsurance contract liabilities</td>
<td>Netted with reinsurance contract assets</td>
<td></td>
</tr>
<tr>
<td>DAC</td>
<td>Presented separately</td>
<td>Included in the measurement of insurance contracts and disclosed in the notes</td>
</tr>
<tr>
<td>Value of business acquired</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Premiums receivable</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Policy loans</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Unearned premiums</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Claims payable</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Agenda

• Background and Accounting Model
  Carlos Arocha
• IFRS 4 vs. IFRS 17

• Implementation Challenges
  Jodie Carlson
  Angie Schwendeman

• Alignment with Long Duration Targeted Improvements (“LDTI”)  
  Darryl Wagner
• Actuary as a Business Advisor
Implementation Challenges
Company Background

- Transamerica’s main product lines include annuities, mutual funds, pension, life, long-term care, and other health insurance
- Owned by Aegon which is based in the Netherlands. Other major units include the Netherlands, UK, Eastern Europe, and Asia
- IFRS 17 is a global project with local implementation teams in each country unit
- Mix of global working groups, led by parent company corporate center to drive consistent methodology, with local teams focused on product-specific application and implementation
- Transamerica has an IFRS 17 business project team and implementation project team
Finance Modernization Program to the Rescue

- Transamerica began its Finance Modernization program in 2016 with a 7-year roadmap:
  - Establish a data governance framework, adopt a consistent data model and build a single source of truth data warehouse
  - Rationalize the number of actuarial platforms being used for pricing, valuation and cash flow projections
  - Implement an accounting rules engine to automate journal entries, allocations and accounting reclassifications
  - Replace our existing general ledger system

- 2017 – added IFRS 17 “Readiness” into scope

- 2018 – added admin system conversions into scope
Software Selections

• CSM Software Selection

  • Considered either more of an actuarial approach or financial approach

  • Selected financial-based software since already using their accounting rules engine, and had rationalized to two different actuarial modeling software platforms

  • Given the standard is very actuarial in nature, can cause some challenges in applying necessary methodology – heavy support to implement from actuarial consultants and internal staff
Data Dilemmas

- IFRS 17 requires the use of the Full Retrospective Approach (FRA) unless it is proven to be impracticable
- For most Transamerica’s product lines, we have concluded that FRA is impracticable so will use either the Modified Retrospective or Fair Value approach
- Main driver for impracticability is the lack of actual cash flows at the necessary granularity – issue year splits and/or profitability splits
- Issue that is easier to solve prospectively, but much more challenging to go back to gather data historically
- Our Modernization efforts will allow us to meet future data granularity needs of the standard through the build-out of a detailed Data Warehouse
Actuarial Modeling

• Efforts already underway on actuarial model conversions to reduce the number of modeling platforms; having to now layer on additional changes for IFRS 17 after conversions are completed

• IFRS 17 standard requires cash flows which represent the “full range of possible outcomes” which is particularly important for business with financial options and guarantees, or dynamic lapse behavior

• Certain products under IFRS 4 (which still allowed use of local regulations) use deterministic interest and/or equity modeling but now will need to move to stochastic modeling

• Larger number of model runs expected in order to produce necessary IFRS 17 disclosures, as well as potential for new model output (ex: coverage units)

• Combination of the increased stochastic models and number of runs leads to overall higher runtimes and pull on grid capacity and need for use of cloud
IFRS 17 requires some complicated discounting methods for expected cash flows as well as other modifications for data coming out of the models for reinsurance and risk adjustment (diversification factors).

Quickly became apparent we needed to determine what our solution would be:
- Put code into each actuarial model to handle
- Try to utilize our CSM tool ICE
- Look for external software vendors that could help
- Build an internal solution

Enter...FIRE! (Function for Interest & Risk adjustment Engineering)
- Internal application that could take output from each model and standardize and discount expected cash flows prior to feeding to the CSM tool
Implementation Challenges & Operational Readiness

- Implementing vendor software while it is still being built and designed
- Changing requirements as the standard has continued to evolve and methodology from our parent and internally at TA is revisited
- Testing with mock vs actual data and trying to implement controls and validate results without having a current production process to compare to
- Competing priorities for project teams and business-as-usual resources, also knowledge gaps to address since the standard is new
  - Conducting multiple rounds of financial impact analysis to test methodology and gain more comfort with the new financial statements and necessary analysis
- Variety of training needs and timing required for different teams
- Implementation requires support from multiple areas, including actuarial, finance, technology, and project management – communication, collaboration, and teamwork is key to success!
- Future IFRS 17 reporting will further increase the need for actuarial and finance to work closely together
A Balancing Act – Transition Equity Impact

<table>
<thead>
<tr>
<th>Product Characteristics</th>
<th>Examples</th>
<th>Expected Direction</th>
<th>Expected Magnitude</th>
</tr>
</thead>
<tbody>
<tr>
<td>Long duration, interest sensitive</td>
<td>Universal Life, Long Term Care, Traditional Life</td>
<td>Medium – XL</td>
<td>Medium</td>
</tr>
<tr>
<td>Equity-sensitive Life</td>
<td>Indexed Universal Life, Variable Universal Life</td>
<td>Medium</td>
<td></td>
</tr>
<tr>
<td>Equity-sensitive Annuities</td>
<td>Variable Annuities with and without guarantees</td>
<td>Varies</td>
<td>S - M (Net)</td>
</tr>
<tr>
<td>Short duration</td>
<td>Non-LTC Health</td>
<td>Varies</td>
<td>Small</td>
</tr>
</tbody>
</table>

- Impact is incredibly sensitive to the economic markets at the time of transition
- Largest impacts seen on our longest-duration, interest-sensitive business; mainly driven by discounting particularly for business that currently uses locked in assumptions (FAS 60)
- Our more equity-driven Life business shows a help to equity; risk-free rate is assumed as the equity return (vs. average management best estimate assumption) which leads to lower accumulation and more lapses, reducing our liability
- VA impact is dependent on type of rider associated, if any. Much of our business has a Guaranteed Lifetime Withdrawal Benefit (GLWB) which already uses a Fair Value approach so will have less impact; however, we expect our business with a Guaranteed Minimum Income Benefit (GMIB) will see a hit to equity at transition.
- Magnitude of impact is also driven by transition approach and, for those using Fair Value, the methodology applied
Agenda

• Background and Accounting Model                    Carlos Arocha
  • IFRS 4 vs. IFRS 17

• Implementation Challenges                    Jodie Carlson
  • Angie Schwendeman

• Alignment with Long Duration Targeted          Darryl Wagner
  Improvements (“LDTI”)          
• Actuary as a Business Advisor


Alignment with Long Duration Targeted Improvements ("LDTI")
## LDTI
Summary of targeted improvements and the impact

<table>
<thead>
<tr>
<th>Cash Flow assumptions</th>
<th>Discount Rate</th>
<th>Retrospective Unlocking</th>
<th>Market Risk Benefits</th>
<th>DAC</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Current best estimate assumptions for liability cash flows</td>
<td>• Updated discount rate at each reporting date</td>
<td>• Net premium ratio unlocked using</td>
<td>• Separately measured at fair value</td>
<td>• Definition of expenses eligible for deferral remains unchanged</td>
</tr>
<tr>
<td>• Impact recognized in Net Income</td>
<td>• Impact recognized in Other Comprehensive Income</td>
<td>• Actual historical experience from issue</td>
<td>• Definition: a contract or contract feature that both provides protection to the contract holder from capital market risk and exposes the insurance entity to other-than-nominal capital market risk</td>
<td></td>
</tr>
<tr>
<td>• Assumptions reviewed annually or more frequently if evidence suggests</td>
<td>• Based on an “upper medium grade (low credit risk) fixed income instrument yield”</td>
<td>• Updated assumptions</td>
<td></td>
<td>• DAC amortization in proportion to the remaining life of the contract</td>
</tr>
<tr>
<td></td>
<td>• US: A-rated corporate bond yield</td>
<td>• Discount rate at inception</td>
<td></td>
<td>• No interest accrual</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Impact recognized in operating income</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

New disclosures covering significant detail on reserve rollforwards, separate account, market risk benefit attribution, and DAC rollforwards
## Comparison between IFRS 17 and LDTI

Some fundamental differences in the framework

<table>
<thead>
<tr>
<th>Reserving Approach</th>
<th>IFRS 17 (for long-duration contracts)</th>
<th>US GAAP LDTI</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>• Gross premium valuation - captures loadings in future premiums at valuation</td>
<td>• Net premium valuation - effectively recognizes the profit loadings in premiums as they are received</td>
</tr>
<tr>
<td></td>
<td>• CSM is established and released over time</td>
<td>• Deferred profit liability - only set up for certain¹ contracts</td>
</tr>
<tr>
<td>Computation Requirement</td>
<td>• Requires a current value, as the unbiased “probability-weighted mean of the full range of possible outcomes”</td>
<td>• Deterministic valuation approach is prevalent</td>
</tr>
<tr>
<td></td>
<td>• TVOG necessary for the cost of options and guarantees</td>
<td>• Market Risk Benefits measured at fair value involving stochastic runs</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Unit of Account</th>
<th>IFRS 17 (for long-duration contracts)</th>
<th>US GAAP LDTI</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>• At least three groups of contracts for any portfolio² under the general model</td>
<td>• Up to an issue year or more granular cohort by product allowed</td>
</tr>
<tr>
<td></td>
<td>• Grouping of onerous contracts based on individual contract level calculation³</td>
<td>• No individual contract level calculation is required</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Financial Impact of Assumption Unlocking</th>
<th>IFRS 17 (for long-duration contracts)</th>
<th>US GAAP LDTI</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>• Prospective unlocking – future assumptions changes do not impact the current period income; impact absorbed by CSM</td>
<td>• Retrospective unlocking – future assumption changes impact the current period income</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Revenue Recognition</th>
<th>IFRS 17 (for long-duration contracts)</th>
<th>US GAAP LDTI</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>• Based on derived figures involving actuarial calculation</td>
<td>• Based on Premium for traditional products and on Margins for non-traditional products</td>
</tr>
</tbody>
</table>

---

¹ limited-pay or contracts with excessive charges

² each group shall not include contracts issued more than one year apart

³ unless there is reasonable and supportable information to conclude on a set of contracts
Leveraging Operational Synergies

Because both FASB and IASB approaches address similar considerations, companies that need to dual-adopt are finding opportunities for synergies as they refine their approach to implementation.

**Processes and System Design**
- System logic and account mapping changes

**Data Quality and Integration**
- Additional data granularity and volume

**Actuarial Systems and Modeling**
- Modeling changes and system enhancements

**Policy Development**
- Accounting policies / actuarial methodologies updates

**Financial Reporting and Disclosures**
- Redefined reporting and governance framework

**Leverageable Activities**
- Processes, controls, and target operating models to govern across standards
- Concurrent review/assessment of historical cash flows and other granular data
- Vendor decisions and software integration for multi-basis valuation
- Common topics such as techniques used in development of yield curves, unit of account etc.
- New architecture for data repository, sub-ledger, and general ledger to facilitate a smooth production and minimize the operational risk
Actuary as Business Advisor
Areas where Actuaries can Contribute

Actuarial expertise and perspective adds value in many dimensions

**Accounting Policies and Valuation Methodology**
Actuaries can play a role in developing the following:
- Valuation methodology/calculations
- Accounting policies and control procedures
- Reporting and disclosures
- Materiality concepts/guidelines

**Financial Statement Development**
Pervasive contribution of actuaries in financial reporting, including timely provision of the following critical inputs:
- Units of coverage
- Risk adjustment for non-financial risk
- CSM
- Reconciliation of insurance liabilities
- Actual vs. expected cash flows: Income calculation is actuarial in nature

**Implementation**
- Data – data requirements, data reconciliations, storage and archiving
- Systems – actuarial valuation, sub-ledger and related validation
- Processes - reporting, valuation and internal controls

**Driving Company Strategy and Governance**
- Asset-Liability-Management
- Redefining KPIs
- Planning, forecast and budgeting
- Profitability management
- Product development
- Investor relations management; profit emergence articulation
- Analytics to unlock insights from financial reporting
Impact on Communication
IFRS 17 will have broad and profound impacts on insurers; therefore internal and external communications will be impacted. Actuaries can play a key role.

**Financial Reporting**
- Substantial change in financial reporting
- Additional disclosures and figures to report
- Additional audit procedures

**Investor Relations**
- Better comparability among insurers’ financial reports
- Need to prepare for rating agency questions
- Need for articulation of profit emergence

**Business Strategy**
- Insights on product profitability
- Inputs to forecasting and budgeting process

**Management Reporting**
- Adaptation of KPIs to new external measurements
- Improved productivity within finance closing process
- Increased and improved audit procedures
- Alignment of risk and financial reporting

**People/Organization**
- Potential changes in roles and responsibility between Actuarial and Finance
- Cross-Functional collaboration
- Technical and functional trainings

**Performance Evaluation**
- Education of the whole organization on how success is measured and presented to the market
- Recalibration of the KPIs used for incentives and remuneration of employees and sales force
### Professionalism

Key considerations highlighted by IFRS 17

<table>
<thead>
<tr>
<th>Data Reliance</th>
<th>Interaction with and Reliance on Others</th>
<th>Dealing with a New Framework and New Methodologies</th>
<th>Cross-border Issues for Global Companies</th>
<th>Responsibility to the Public and to the Actuarial Profession</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Heavy reliance on data</td>
<td>• Cross-functional collaboration required within Actuarial, Business, Technology, Finance, Risk, and Human Resources</td>
<td>• Acquisition of in-depth knowledge of IFRS 17</td>
<td>• Efficient flow of information and transparent communication across various geographical entities</td>
<td>• Adherence to high standards of conduct and ethical values, practice, and qualifications</td>
</tr>
<tr>
<td>• ASOP 23 and IASP 1 provide guidance on data quality standards</td>
<td>• ISAP 1 Section 2.3: Reliance on Others and ASOP 41, Actuarial Communication provide the relevant guidance</td>
<td>• IASP 4, IAN 100, recent SOA textbook <em>International Financial Reporting for Insurers</em>, and American Academy’s Practice Note on IFRS provide detailed guidance on IFRS17 concepts</td>
<td>• Awareness of nuances and specificities associated with various reporting frameworks to ensure compliance for both parent and subsidiaries</td>
<td>• Code of Professional Conduct sets forth the profession’s responsibilities</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Awareness of local actuarial professional code of conduct</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Actuarial Guidance and Standards of Practice

Actuaries have many IFRS 17 resources with the addition of new pronouncements and interpretations; various actuarial associations have published guidance on IFRS 17

- **International Actuarial Note (IAN) 100**, published by International Actuarial Association (IAA), provides information on application of IFRS 17 accounting: [https://www.actuaries.org/IAA/Documents/Publications/IANs/IAN_100_Consultation/IAN100_ED_17January2019.docx](https://www.actuaries.org/IAA/Documents/Publications/IANs/IAN_100_Consultation/IAN100_ED_17January2019.docx)

- **International Actuarial Standard of Practice (IASP) 4** adopted by IAA provides guidance on performing IFRS 17 related actuarial services, particularly with respect to carrying out actuarial services professionally: [https://www.actuaries.org/IAA/Documents/CTTEES_ASC/Final_ISAPs_Posted/IAA_ISAP4_ApprovedFinal_21Nov2019.pdf](https://www.actuaries.org/IAA/Documents/CTTEES_ASC/Final_ISAPs_Posted/IAA_ISAP4_ApprovedFinal_21Nov2019.pdf)

- **IASP 1** Section 2.3 “Reliance on Others” and Section 2.5 “Data Quality”: [https://www.actuaries.org/IAA/Documents/CTTEES_ASC/Final_ISAPs_Posted/ISAP1_Review_adopted_1Dec2018.pdf](https://www.actuaries.org/IAA/Documents/CTTEES_ASC/Final_ISAPs_Posted/ISAP1_Review_adopted_1Dec2018.pdf)

- **International Financial Reporting for Insurers** – textbook recently published by SOA to assist in understanding the IFRS guidance issued in May 2017: [http://send.soa.org/link.cfm?r=I_SMR63sP7_ZYcVeMCJ9Ag~~&pe=xL8xSUFe_YEftbbd5B644DSa39EnjzqN7luEeICD22wOjOHK5v-SyBngSuarmCdcPszO5jH38ATtWy7nn2mYQA~~&t=WeerwueBfYrfrcG-5oUGA8Q~~](http://send.soa.org/link.cfm?r=I_SMR63sP7_ZYcVeMCJ9Ag~~&pe=xL8xSUFe_YEftbbd5B644DSa39EnjzqN7luEeICD22wOjOHK5v-SyBngSuarmCdcPszO5jH38ATtWy7nn2mYQA~~&t=WeerwueBfYrfrcG-5oUGA8Q~~)


Appendix 1 – Background
When can the PAA be used?

The PAA can be used when:

- The resulting liability will be similar to that produced by the GMM
  - this condition is not met if significant variability of the cash flows is expected

- The contract coverage is one year or less

![Diagram](image_url)

- Liability for remaining coverage
- Contractual service margin
- Risk adjustment
- Expected cash flows (adjusted for time value of money)

Premium Allocation Approach | General Measurement Model
Separation of Components

Insurance components
Distinct investment components
Embedded derivatives (not closely related)
Distinct performance obligation to provide goods and services
Non-distinct investment components

Separation
Disaggregation

IFRS 17 Insurance contracts
IFRS 9 Financial instruments
IFRS 15 Revenue from contracts with customers
IFRS 17 (P&L notes) Insurance contracts

Disaggregation is the exclusion of an unseparated investment components from insurance contract revenues
Appendix 2 – Assumptions Used in the Numerical Illustration
Illustrative Example

10-year term life insurance

- Claims are payable only upon the death of the policyholder
- Premiums are invested at 3% in financial assets that are measured at fair value
- Investment gains and losses are recognized in profit or loss
Illustrative Example

IFRS 4 Assumptions

• Premiums are accounted for as revenue when received
• Claims and expenses are accounted for as expenses when incurred
• Insurance contracts are measured using current estimates
• An implicit allowance for risk is made by increasing claim estimates by 10% of the discounted cash flows
• The discount rate is 2.5%, and it is based on the expected return on assets, less a margin

IFRS 17 Assumptions

• The risk adjustment for non-financial risk is determined as a fixed percentage of the undiscounted cash flows
• The discount rate at the inception of the contracts is 2%
Appendix 3 – End-to-End Solution
End-to-End Solution