

EFU Life Assurance Ltd

IFRS 17 Workshop

28th to 31st October 2019

EFU Life House - Karachi

Part 3

SIRCONSULTANTS

Agenda – Part 3

7

Suggested IT related Options to design and implement IFRS-17

8

Transition

Agenda – Part 3

7

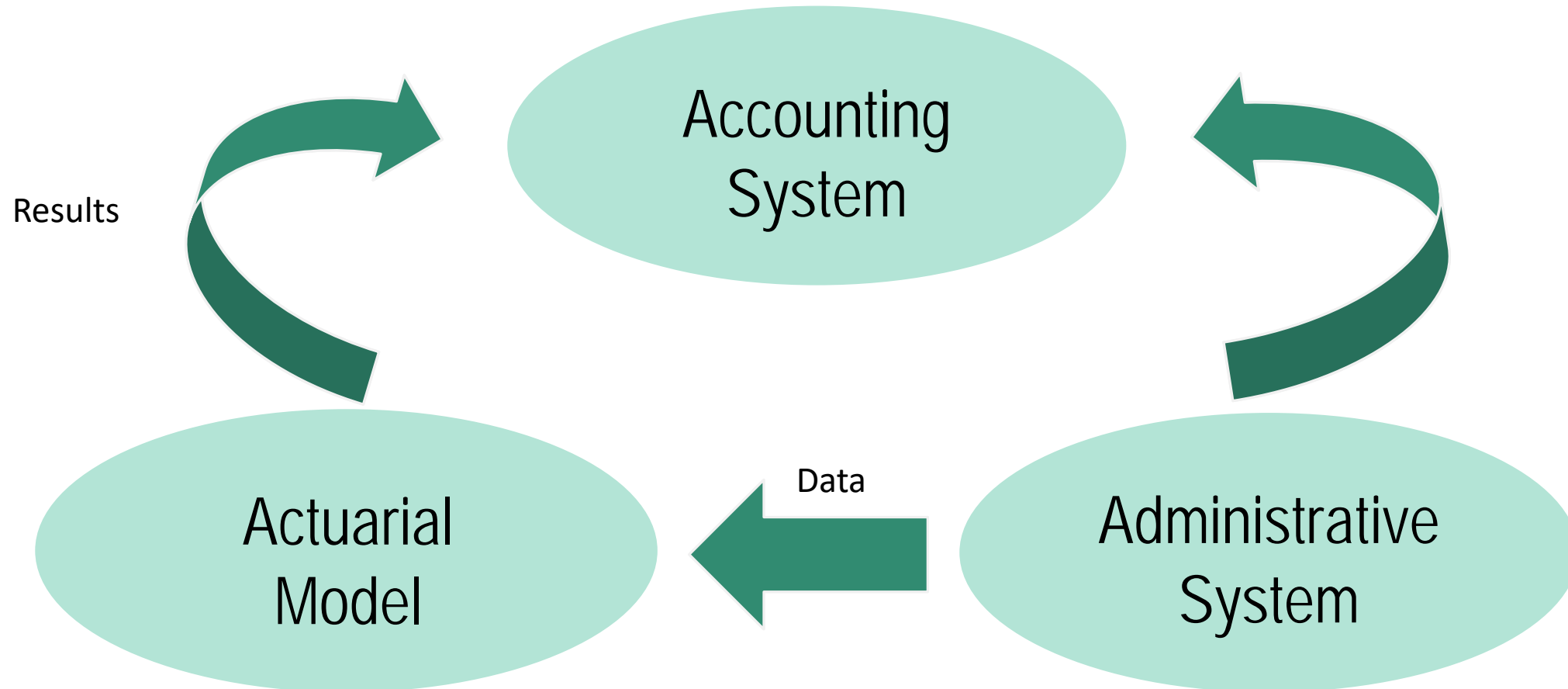
Suggested IT related Options to design and implement IFRS-17

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Transition

Suggested IT related options to design and implement IFRS-17

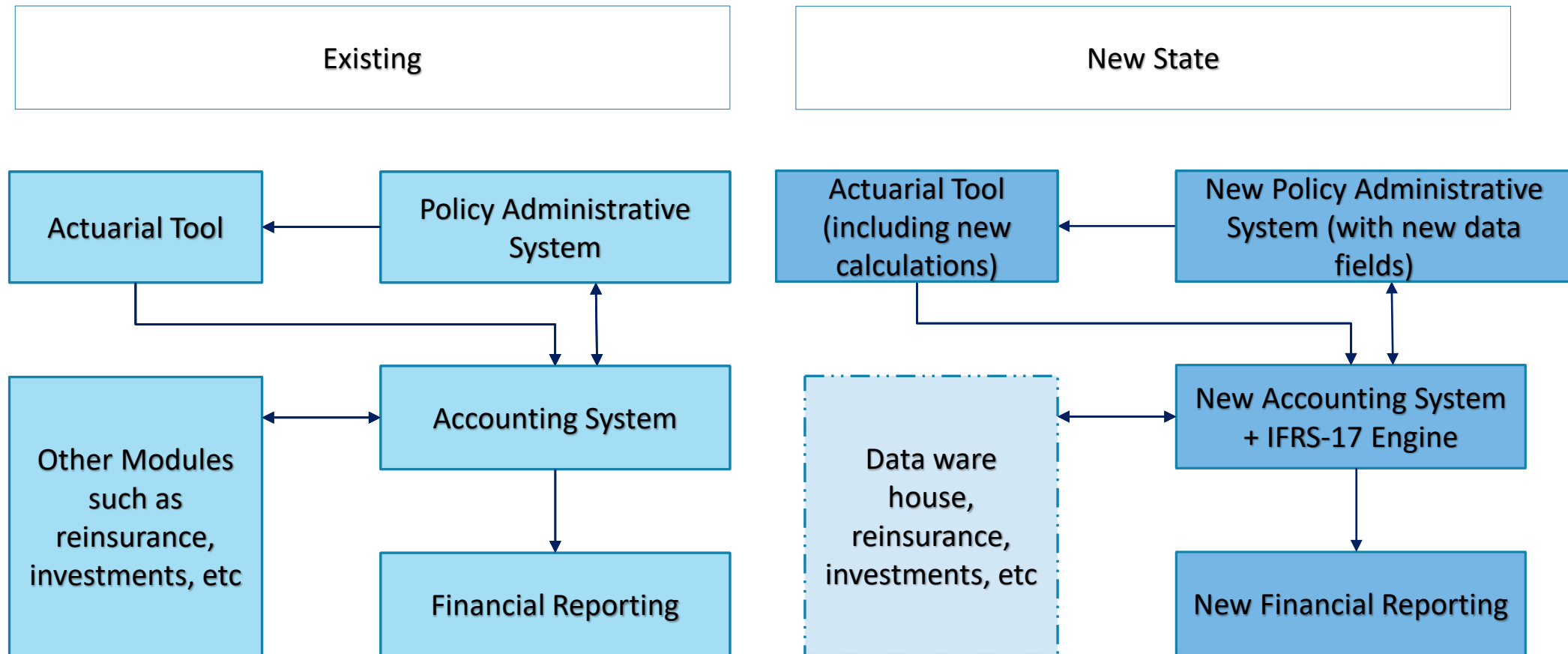
Broad Picture – Flow of the Information



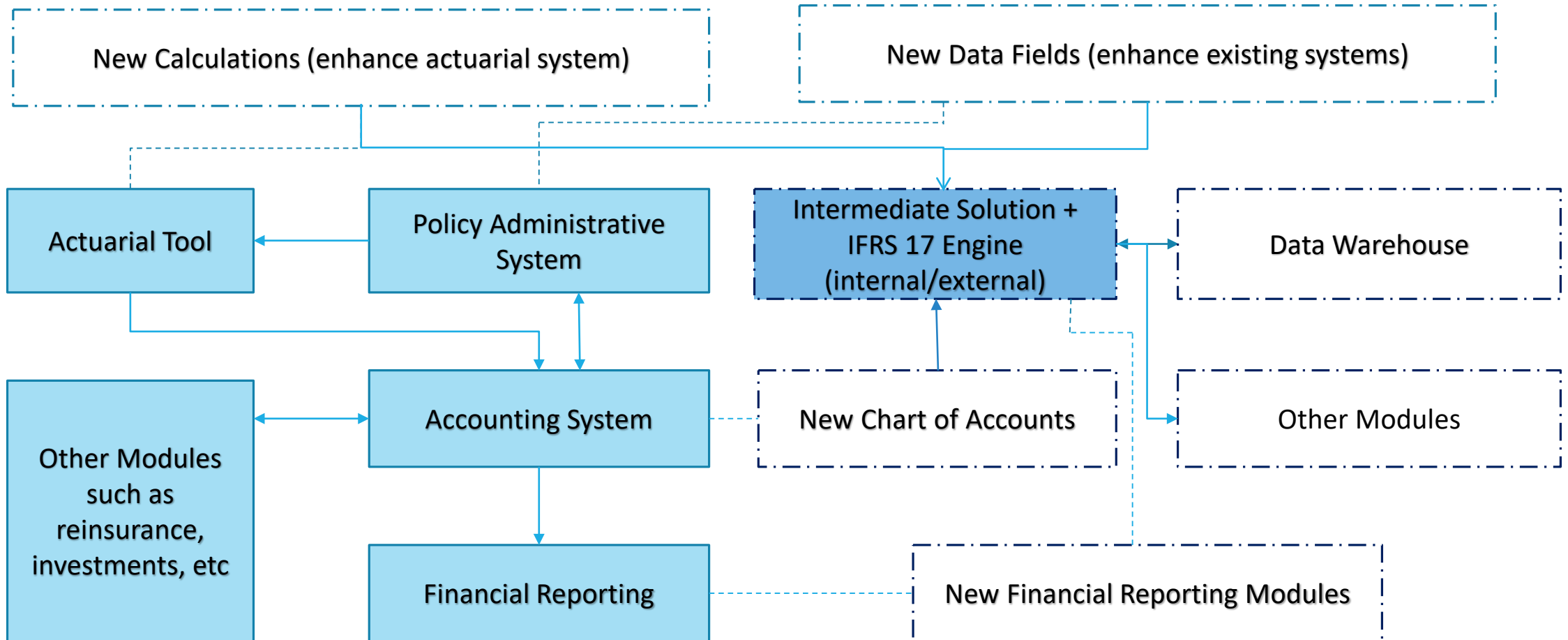
IT related Options to Design and Implement IFRS-17

- **Option A:** Acquire and Implement New System which are IFRS-17 complaint (not suggested)
- **Option B:** Intermediate solution (work in connection with existing systems) but requires significant work to develop IFRS-17 engine
- **Option C:** Intermediate solution (work in connection with existing systems) but using external vendors developed IFRS-17 engine
- **Option D:** Mixture of existing and new systems (work in connection with existing systems) but new system applicable for life business (plus either internal or external IFRS-17 Engine)

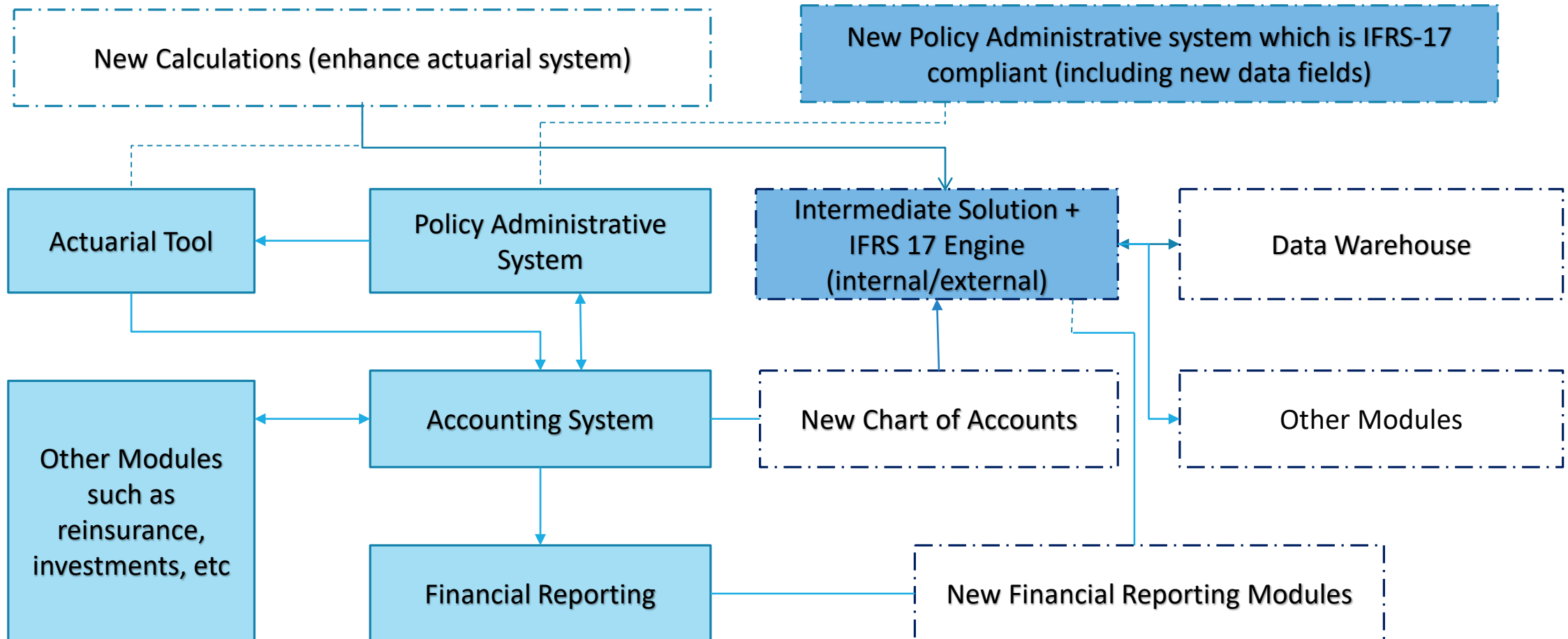
Existing State Vs. IFRS 17 (Option A) – Not suggested



Existing State Vs. IFRS 17 (Option B or C)



Existing State Vs. IFRS 17 (Option D)



IFRS-17 Engine

- Core – Liability Measurement Models – Premium Allocation Approach, General Measurement Model and Variable Fee Approach
- It should ideally contains the following (at minimum):
 - Initial recognition – CSM and release pattern, Loss Component and run-off, Risk adjustment at initial recognition, other pre-calculations
 - Movement analysis – all items that will be utilized in the movement analysis and statement of comprehensive income, such as:
 - Discounting using locked-in rates and current rates
 - Unwinding effect
 - Change in expectations
 - Identification of loss components
 - Release/amortization pattern
 - Others

IFRS-17 Engine (continued)

- All movements for Liability for incurred claims and liability for remaining coverage
- Capability to perform calculations based on different scenarios
- Capability to handle big volumes of data – CSM is to be calculated on contract/portfolio level
- Capability of exploring data at different levels of granularity
- Transparency and audibility of calculations

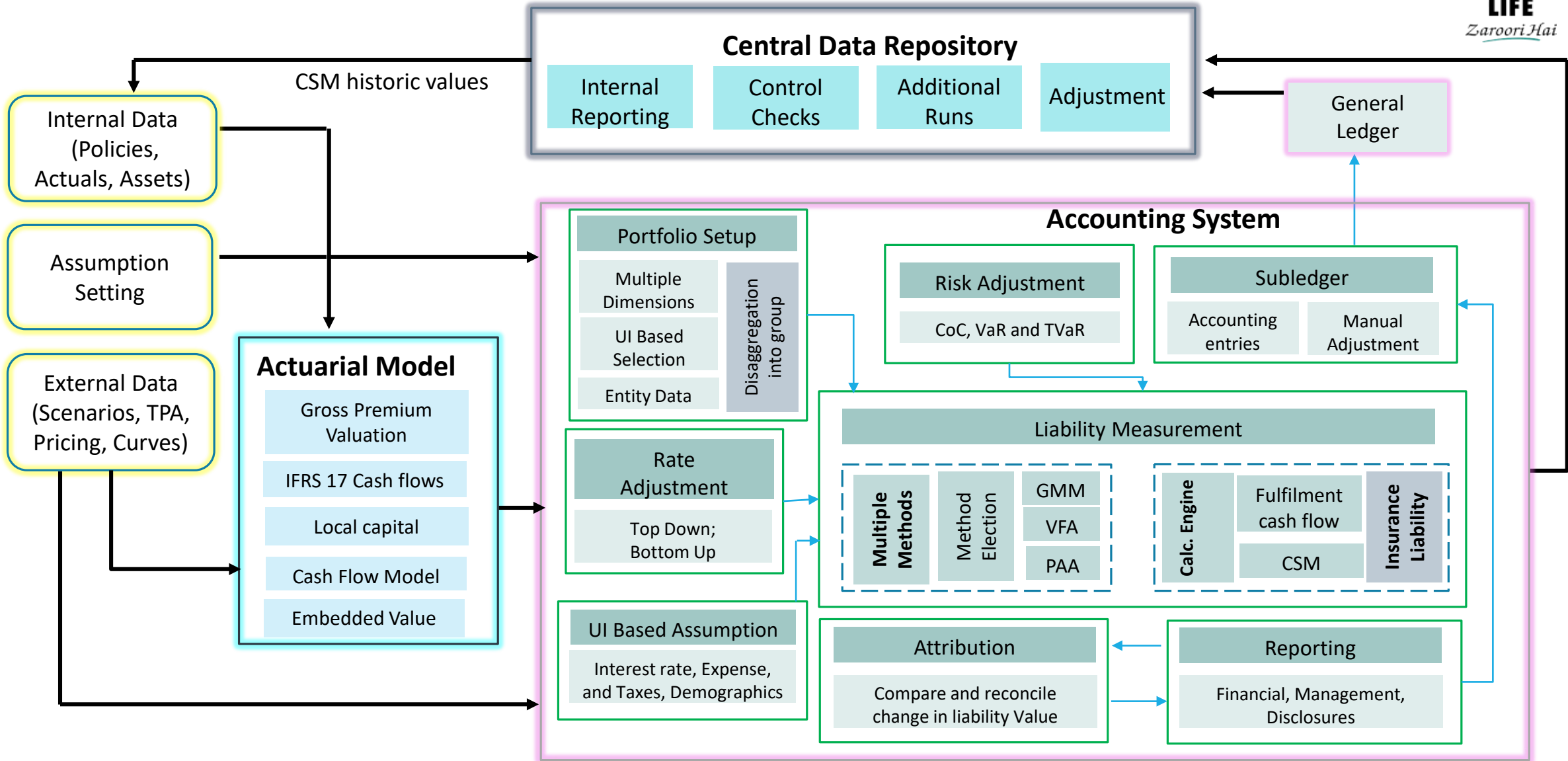
How IFRS – 17 Engine Should Work Ideally

- Input and Data Validation
- Calculations (IFRS – 17 Engine itself)
- Outputs
- Integration of workflow and processes

- Stat of Financial reports
- Stat of Comprehensive income
- Detailed disclosures on movements
- Process monitoring

- Actuarial input (Cash flows)
- Policy administrative inputs
- Other assumptions

- All input consideration
- Controls & workflow process
- PAA calculations, GMM, VFA (IFRS-17 Core) – liability measurement models
- Account Postings rules (pre-defined or manual adjustments)
- New COA and each methodology
- IFRS 9 can also be incorporated
- Level of aggregation
- Profitability test – at initial and subsequent measurement



IFRS – 17 Engines Available (Vendors Solutions)

| Vendor | Nature |
|----------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|
| SAS | Only Accounting |
| FIS | Prophet Actuarial software (acquired from sun-guard) – separate modules for life and general. Only actuarial; recently introduced accounting module |
| Moody's | Accounting + GGY Axis Actuarial tool (Contains both actuarial and accounting) |
| Oracle | Only Accounting |
| RNA Analysis | Only Actuarial |
| CCH – Tagetik | Only Accounting |
| Willis Towers Watson | Actuarial Tool (Non-Life) + Accounting (no VFA) |
| Others | Several other options |

Requirements of New State – Accounting Modules

- New Subledgers and Chart of Accounts (Sample – refer next slides)
- Amortization Calculations + Pattern (CSM, RA)
- Actuarial cash flows utilization and subsequent accounting (e.g. CSM at subsequent recognition)
- Controls, transition and flow of the process
 - Onerous vs non-onerous
 - Change in assumptions
 - Tracking of liability
- Experience Adjustment and past changes
- Impact on IFRS-9 assets (OCI vs P&L options)
- New Work flows – see next slides

Requirements of New State – Actuarial Tool New Calculations

Few examples:

- New Cash flows requirement (fulfilment cash flows)
- Yield Curves
- Risk Adjustment calculations
- Expected calculations (period-by-period)
- Change in future assumptions
- Discount rate changes
- CSM calculations (at initial recognition)
- Onerous liabilities
- Calculations to be done at desired level of aggregation
- Reinsurance (to be done separately)

Information will flow from policy administrative system and to be fed into the either intermediate solution or accounting system

Requirements of New State – Data Management (few examples)

Recording/maintaining the information at new level of aggregation

- Three level of aggregation:
 - Portfolio level
 - Profitable/onerous/others
 - Underwriting year

Example of New data fields:

- Receivables and Payables at policy level or portfolio level?
- Actual and Expected cash flows for liability for remaining coverage and liability for incurred claims, such as:
 - CSM (Beginning of period), Risk adjustment, Premium, Claims, acquisition cost, onerous liability
 - Discounted values at locked-in rates and current rates
 - Separately for gross and reinsurance portfolios

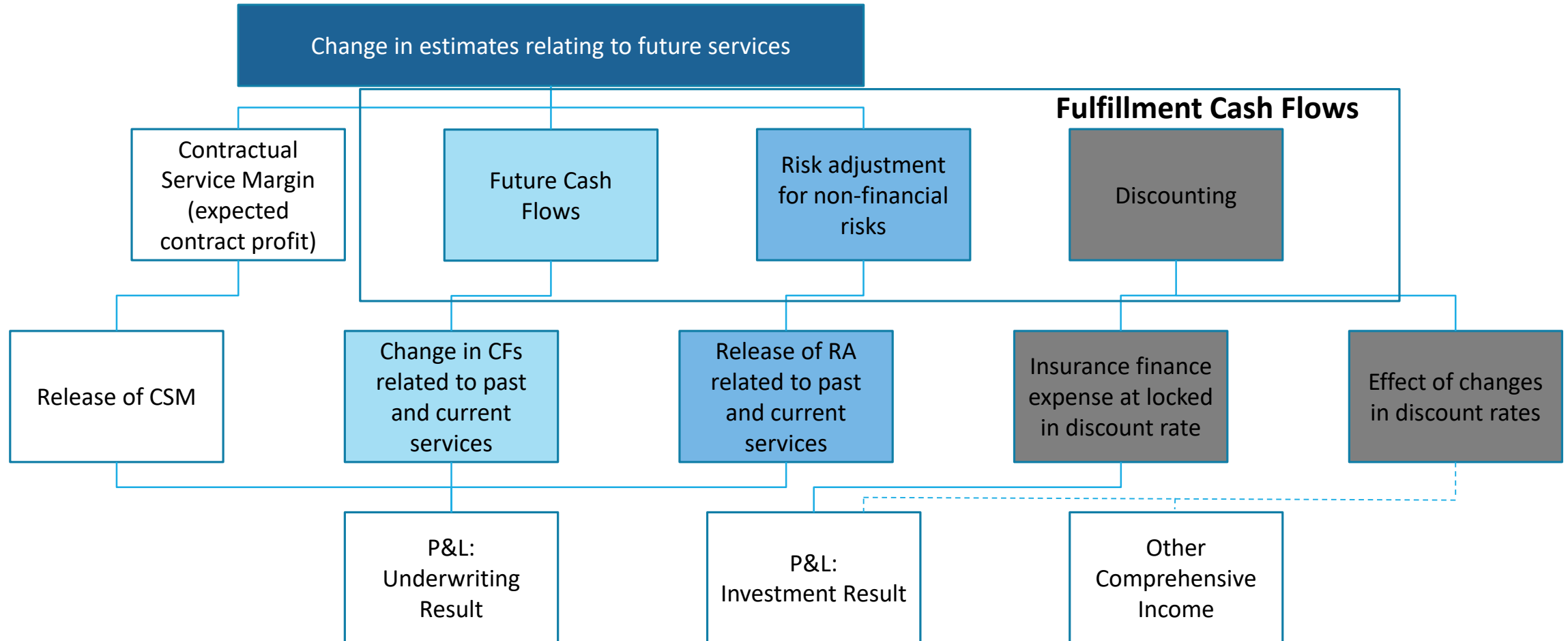
Retrieving information for subsequent measurement, such as

- Onerous contracts CSM, negative and positive CSM for reinsurance, loss component run-off, expected values, yield curves, change in discount rates etc

Chart of Accounts – Future State (Illustrative)

| Tier 1 | Tier 2 | Tier 3 | Tier 4 | Tier 5 | Tier 6 | Tier 7 |
|-----------------------------------|---------------------------------------------|----------------------------------------|----------------------------------------------|----------------------------|-------------|-----------------------------------------------------------------------------------------------|
| Statement of financial position | Cash | | | | | |
| Statement of financial position | Insurance contract (assets) / liabilities | Liabilities for remaining coverage | Excluding loss component | PV of future CFs | | |
| Statement of financial position | Insurance contract (assets) / liabilities | Liabilities for remaining coverage | Excluding loss component | Risk adjustment | | |
| Statement of financial position | Insurance contract (assets) / liabilities | Liabilities for remaining coverage | Excluding loss component | Contractual service margin | | |
| Statement of financial position | Insurance contract (assets) / liabilities | Liabilities for remaining coverage | Loss component | PV of future CFs | | |
| Statement of financial position | Insurance contract (assets) / liabilities | Liabilities for remaining coverage | Loss component | Risk adjustment | | |
| Statement of financial position | Insurance contract (assets) / liabilities | Liabilities for remaining coverage | Pre-recognition cash flows | PV of future CFs | | |
| Statement of financial position | Insurance contract (assets) / liabilities | Liabilities for incurred claims | Claims and other expenses | PV of future CFs | | |
| Statement of financial position | Insurance contract (assets) / liabilities | Liabilities for incurred claims | Claims and other expenses | Risk adjustment | | |
| Statement of financial position | Insurance contract (assets) / liabilities | Liabilities for incurred claims | Investment components | PV of future CFs | | |
| Statement of financial position | Reinsurance contract assets / (liabilities) | Assets for remaining coverage | Total | PV of future CFs | | |
| Statement of financial position | Reinsurance contract assets / (liabilities) | Assets for remaining coverage | Total | Risk adjustment | | |
| Statement of financial position | Reinsurance contract assets / (liabilities) | Assets for remaining coverage | Total | Contractual service margin | | |
| Statement of financial position | Reinsurance contract assets / (liabilities) | Assets for remaining coverage | Pre-recognition cash flows | PV of future CFs | | |
| Statement of financial position | Reinsurance contract assets / (liabilities) | Amounts recoverable on incurred claims | Total | PV of future CFs | | |
| Statement of financial position | Reinsurance contract assets / (liabilities) | Amounts recoverable on incurred claims | Total | Risk adjustment | | |
| Statement of financial position | Reinsurance contract assets / (liabilities) | Amounts recoverable on incurred claims | Investment components | PV of future CFs | | |
| Statement of comprehensive income | Insurance service result | Insurance service expenses | Contracts initially recognised in the period | Contracts issued | Non-onerous | Estimates of present value of future cash outflows excluding insurance acquisition cash flows |
| Statement of comprehensive income | Insurance service result | Insurance service expenses | Contracts initially recognised in the period | Contracts issued | Non-onerous | Estimates of insurance acquisition cash flows |
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| Statement of comprehensive income | Insurance service result | Insurance service expenses | Contracts initially recognised in the period | Contracts acquired | Non-onerous | Estimates of present value of future cash outflows excluding insurance acquisition cash flows |
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| Statement of comprehensive income | Insurance service result | Insurance service expenses | Contracts initially recognised in the period | Contracts acquired | Onerous | Estimates of present value of future cash outflows excluding insurance acquisition cash flows |

Subsequent Measurement and Impact on P&L (under General Measurement Model)



IFRS – 17 Accounting Cycle

- Journal entries
- Ledger accounts
- Unadjusted trial balance
- Adjusting entries
- Adjusted trial balance
- Closing entries
- Post closing trial balance
- Financial statements

Data Management and Governance

It should ideally contains the following in the landing area:

- Configuration – data dictionaries and its definitions, logics (level of aggregation), data from previous reporting periods
- Mapping – calculation methods per level of aggregation, chart of accounts
- Portfolio data – contracts and its group with description (coverage period, yield curves, accounting approach, transition approach), actual cash flows, expected cash flows, exchange rates

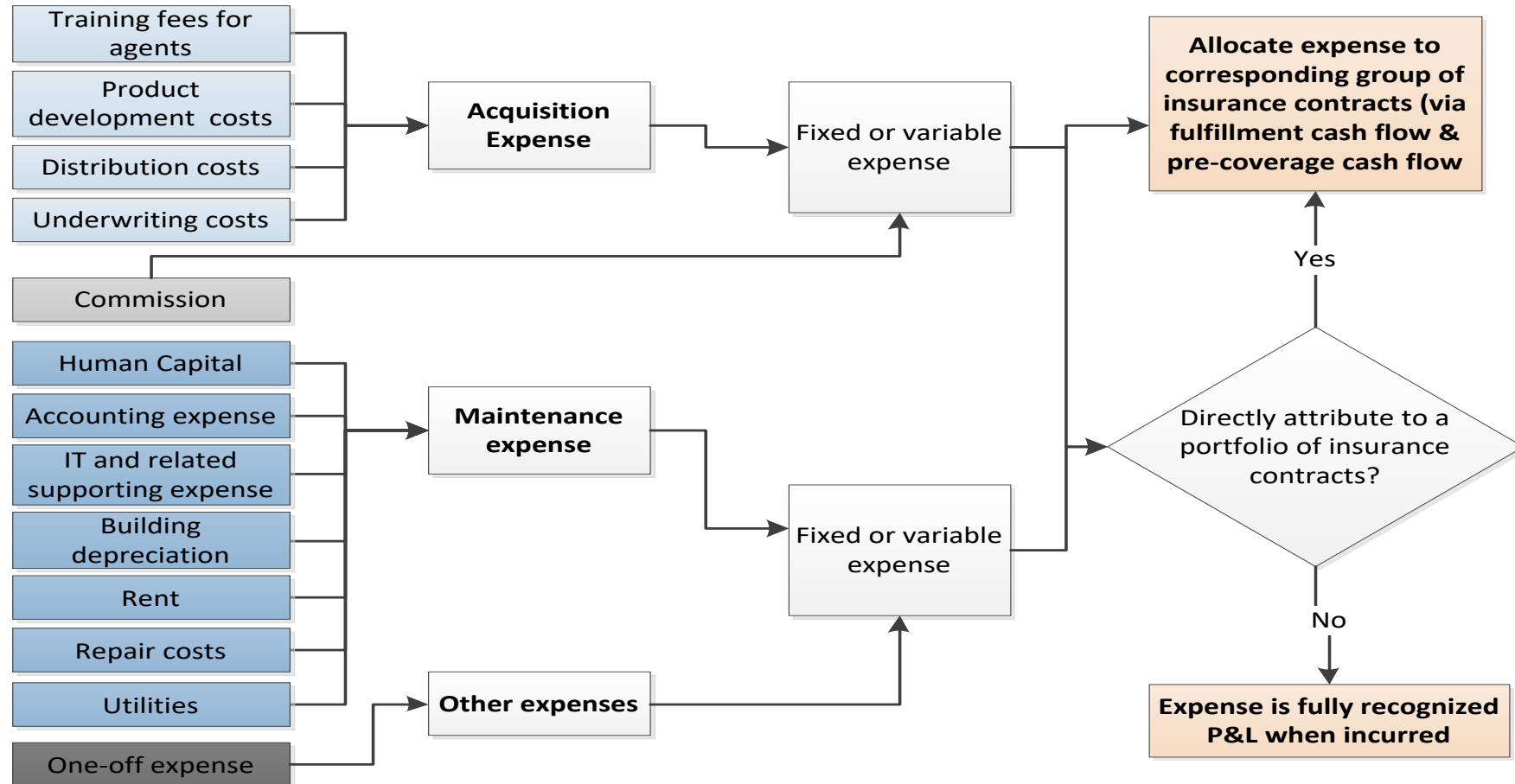
Governance – transparency and auditability, automation, schedule of jobs, integration and automated data collection and consolidation

Integration Module

Process may ideally flow like this:

- Collecting data – actuarial, policy administrative, data validations
- Measurement – IFRS-17 Engine
- Generate Posting – based on new chart of accounts (to be stored/managed in the intermediate system)
- Reporting – perform analysis before consolidation into GL
- General Ledger posting
- Reporting – Financial reports

Expense Analysis – IFRS 17



Expense Analysis – IFRS 17

A lot of decisions need to be taken on the expenses:

- Directly Attributable
- Non-Directly Attributable Cost
- One time expenses
- Alignment for the treatment of expenses with the definitions of expenses categories as per IFRS-17 (such as Acquisition costs include underwriting expenses)
- Other matters?

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Transition

Transition

Transition – Approaches

Full Retrospective Approach (apply IAS 8)

Identify, recognize and measure each group of insurance as if IFRS 17 had always applied

IAS 8: Accounting Policies, Changes in Accounting Estimates and Errors

If it is **impractical** to apply Full Retrospective Approach, the following two can be adopted:

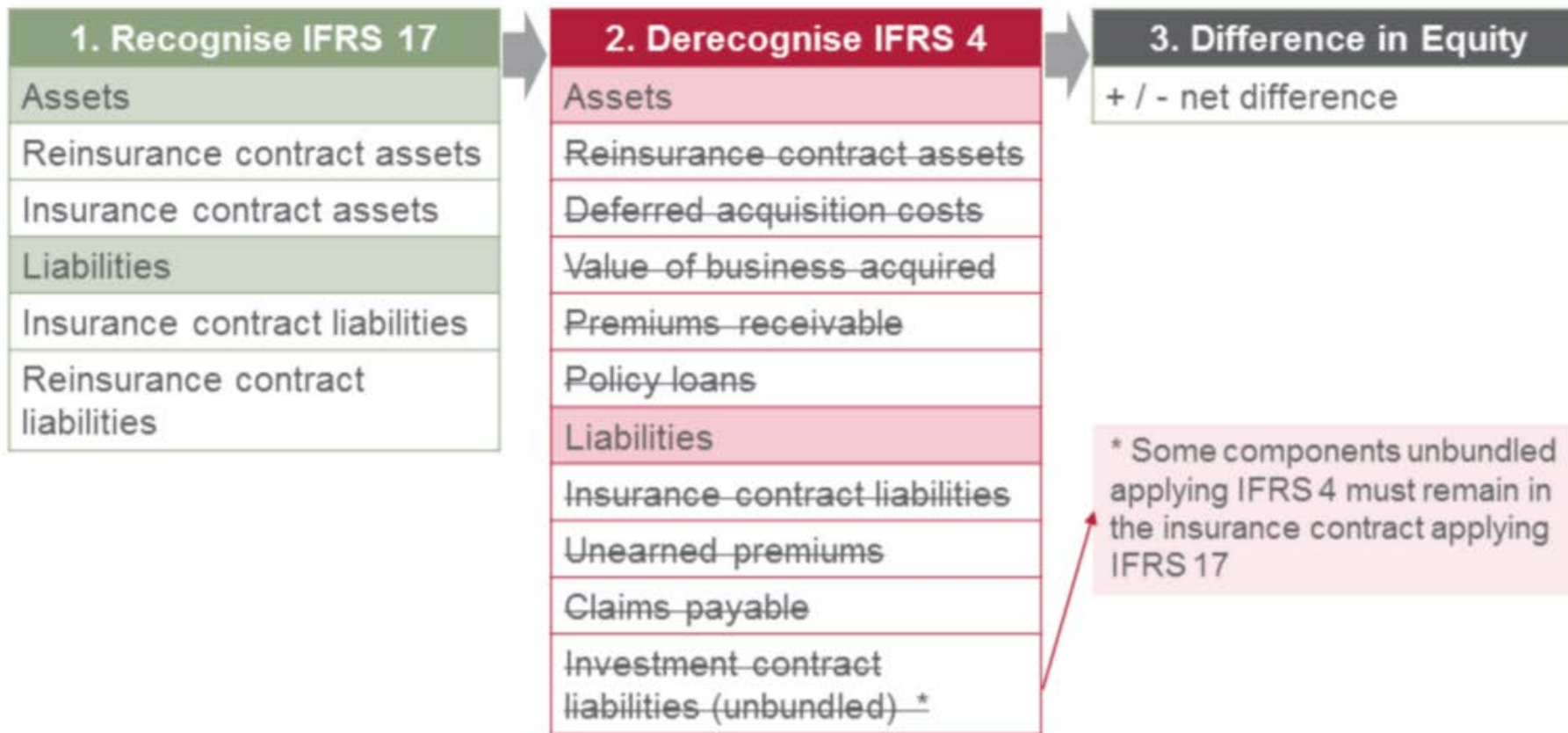
Modified Retrospective Approach

Achieve the closest outcome to retrospective application possible using reasonable and supportable information available without undue cost or effort

Fair Value Approach

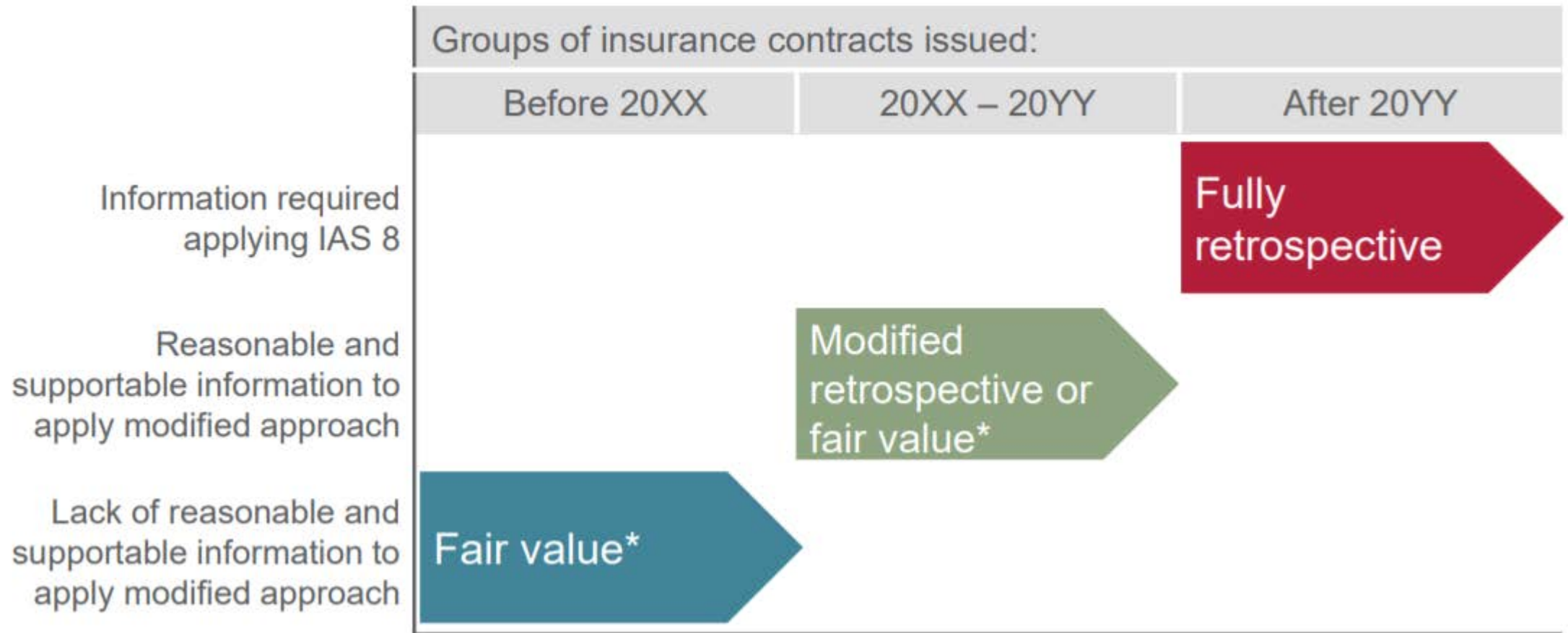
Determine the CSM or loss component for remaining coverage as the difference between fair value of a group of insurance contracts and the fulfillment cash flows

At the transition date



Source: IASB

Different generations of the same product – at the transition date



Source: IASB

Unit Linked Transition– Full Retrospective

| Year | 2 (EOY) |
|-------------------------------------|---------------|
| IFRS 4 | |
| Fair Value of Underlying Assets | 16,229 |
| Liability for Future Years | 16,229 |
| Claim Reserves | 100 |
| Insurance Contract Liability | 16,329 |
| IFRS 17 | |
| PV Expected Future Cash Flows | 15,904 |
| Risk Adjustment | - |
| Fulfillment Cash Flows | 15,904 |
| Contractual Service Margin | 572 |
| Liability for Future Years | 16,475 |
| Claim Reserves | 100 |
| Insurance Contract Liability | 16,575 |

| Year | 2 (EOY) |
|----------------------------------------|--------------|
| Insurance Contract Liability – IFRS 4 | 16,329 |
| Insurance Contract Liability – IFRS 17 | 16,575 |
| Increase in Liability | 247 |
| Impact on Shareholders' Equity | (247) |

| Year | 1 | 2 | Total |
|---------------------------|-------|-----|--------------|
| Profit / (Loss) – IFRS 4 | 1,047 | 330 | 1,377 |
| Profit / (Loss) – IFRS 17 | 553 | 577 | 1,130 |
| Difference | | | (247) |

Actual CSM; determined by tracking the CSM since inception till the transition date as if IFRS 17 was always applicable

Unit Linked Transition – Modified Retrospective

| Computation of Estimated CSM | 2 (EOY) |
|----------------------------------------------------------------------------------------------------------|--------------|
| Fair Value of Underlying Assets | 16,229 |
| Fulfillment Cash Flows at Transition Date | (15,904) |
| Adjustments: | |
| Charges Deducted from Underlying Assets before Transition Date | 1,398 |
| Amounts Paid before Transition Date that would not have varied based on the Returns on Underlying Assets | (21) |
| Estimated CSM before Recognition in P&L | 1,702 |
| Estimated Amount of CSM that relates to Service Provided before Transition Date | (1,232) |
| Estimated CSM at the Transition Date | 470 |

| Year | 2 (EOY) |
|-----------------------------------------------|---------------|
| Insurance Contract Liability – IFRS 4 | 16,329 |
| Fulfillment Cash Flows | 15,904 |
| Contractual Service Margin (Estimated) | 470 |
| Claim Reserves | 100 |
| Insurance Contract Liability – IFRS 17 | 16,474 |
| Increase in Liability | 145 |
| Impact on Shareholders' Equity | (145) |

Proposed Road Map – High Level

1

Gap Analysis Report and Implementation Road Map

Evaluate key differences against current accounting, actuarial and reporting practice (Operational Business Impact & GAP Assessment)
Product Assessment to classify any developed product into measurement models outlined by the Standard
Plan the journey to bridge gaps (Implementation Roadmap)

2

Perform Financial Impact Assessment

Assess the financial impact of major products on the shareholders' equity due to transition under each transition option and evaluate the impact of accounting policy choices under the new accounting standards

3

Deliver Training for Existing Staff and Cover Resource Gaps

Identify implementation leader, evaluate human resource requirements and set up core implementation team
Conduct interactive trainings and series of workshops at different levels

4

Evaluate Solutions

Evaluate the solutions available
Test options for suitability and affordability

5

Develop and Implement New Policies, Processes and Systems

Effectively developing, testing and implementing new policies, processes and systems by engaging all stakeholders
Prepare soft design, carrying out dry runs and go live
Continuously monitor and improve new processes

Note: above phases represent an approach which, in our opinion, an insurer should adopt.

Formal GAP Analysis and Product Assessment

- This would firstly require carrying out the Product Assessment which may include the following:
 - Level of Aggregation
 - Potential Measurement Models Applications
 - Evaluation of Accounting Policies (including Unbundling)
- Next Step to do is the Comparison of Current State vs Future State for the GAP Analysis
 - IT
 - Actuarial
 - Finance
 - Reinsurance
- Organizational Impacts
- People
- Budget

Suggested Road Map (for Design and Implementation)

- The Company should setup the Working Group to address the following areas of Road Map:
 - Accounting and actuarial policies
 - Governance
 - Change management
 - Systems
 - Actuarial and Technical system design – insurance and reinsurance
 - Accounting and reporting system design – insurance and reinsurance
 - Transition
 - Dry-run and Go Live
- Implementation roadmap presented in this section is a high-level roadmap that presents our opinion on how the Company should approach the implementation of the new accounting standard.

Suggested Road Map (for Design and Implementation)

| Ref # | Workstream | Area | Year | 2018 | 2019 | 2020 | 2021 |
|-------|--------------------------------------------------------------------|------|----------|---------|---------|---------|------|
| | | | Quarters | | | | |
| | | | 4 | 1 2 3 4 | 1 2 3 4 | 1 2 3 4 | |
| 1 | Preparation | | | | | | |
| 2 | Project Kick-off | | | | | | |
| 3 | Accounting and Actuarial Policies | | | | | | |
| 4 | Governance | | | | | | |
| 5 | Change Management | | | | | | |
| 6 | Systems - High Level Review | | | | | | |
| 7 | Actuarial and Technical System Design - Insurance and Reinsurance | | | | | | |
| 8 | Accounting and Reporting System Design - Insurance and Reinsurance | | | | | | |
| 9 | Systems - Other Detailed Requirements | | | | | | |
| 10 | Transition | | | | | | |
| 11 | Dry-run | | | | | | |
| 12 | Go Live | | | | | | |

Road Map (continued)

- Working group(s) task are to:
 - Validation of the gaps identified
 - Estimation of the cost and effort involved in addressing the gaps
 - Setting up the project plan to address the gaps (including the milestone of each stage realistically)

A steering committee and design authority would also be required to oversee the process.

Road Map – Next Steps

The following are the suggested next steps for the Company:

- Approval from the Board for the project (including training)
- Steer Committee setup for general governance, milestone and budget
- Setting up the Working Groups / Design Authority – define the mandates, members, roles and responsibilities – to review and sign off key choices
- Ensure milestone and budgets
- Assigning the responsibilities of all Working Groups (internal and external resources)

End-to-end prototype for functional requirements.

Applying IFRS 17 – effects on reported equity


| Factors that are expected to impact on the reported equity | Impact on Equity |
|--------------------------------------------------------------------------------------------------------------|------------------|
| Acquisition costs are currently expensed as incurred | Increase |
| Insurance Contracts are currently measured using historical interest rates that are lower than market rates | Increase |
| Risk margins currently used are higher than the risk adjustment used to apply IFRS 17 | Increase |
| Profits are currently recognized at contract inception (not apply to general insurers) | Decrease |
| Aggregation of onerous contracts and profitable contracts is currently permitted | Decrease |
| Discount rates are currently based on assets backing insurance contract liabilities | Decrease |
| Insurance Contracts are currently measured using historical interest rates that are higher than market rates | Decrease |
| Risk margins currently used are lower than the risk adjustment used to apply IFRS 17 | Decrease |


Source: IASB – IFRS 17 Effect Analysis

Disclaimer

- *The information contained in this presentation has been extracted from IFRS 17 Insurance Contracts Standards, issued in May 2017*
- *In this presentation, presenter has expressed his views, opinions and conclusions on the impact of IFRS-17 for insurers, unless stated otherwise*
- *Examples have also been provided based on the presenter's view*
- *The purpose of this presentation is solely to give an overview, idea and brief the requirements of IFRS-17 Insurance Standards for Insurers only however implementation requires significant judgement which may have different views*

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