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US GAAP Long – Duration Targeted Improvements

South Eastern Actuarial Conference
November 15, 2018

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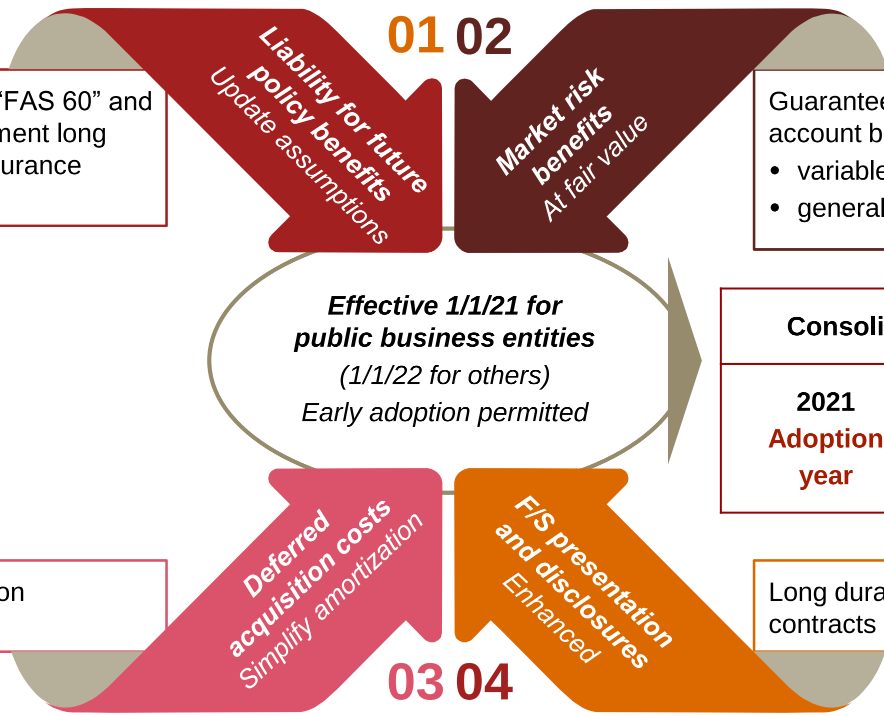
FASB LDTI Overview of Changes

Traditional “FAS 60” and limited payment long duration insurance contracts



Guarantees in addition to account balance in:

- variable annuities
- general account annuities

Consolidated Statements of Operations		
2021 **Adoption year**	**2020** **Restated**	**2019** **Restated**

Long duration contracts

Long duration contracts

Overview

The LDTI Implementation challenge

PwC's LDTI Survey Report of 2018 Shows…

- All insurers believe that the timeline to adoption will be challenging to some degree, of which 59% of companies believe it will be extremely challenging and a further 27% believe it will be at least moderately challenging.
- Over 70% of companies believe that the implementation across actuarial systems and data & processes will be challenging or extremely challenging.
- Over 65% of companies rated the changes to Market Risk Benefits, disaggregated roll-forwards, recalculating Net Premium Reserves on a cohort basis and transition as either extremely challenging or challenging.

Technology development approach

Insurers have the choice of one of three main options to address LDTI requirements. Some firms will use it as a chance to strategically modernise their systems architecture. Others will take a compliance focused approach..

Objectives

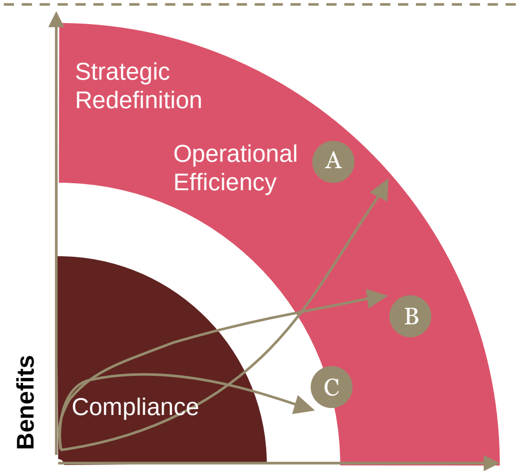
- Get organized and educated
- Understand the impact and plan the project
- Transition to the new standard
- Jan 01, 2021

Adoption

1. Initial project set-up, and awareness training*
2. Assess impact*
3. Project planning*
4. Gather and validate data
5. Implement systems and processes
6. Dry run and comparatives

Phases

Implementation approach



A ***Strategic Path***
Some firms are taking this opportunity to transform their finance function-re-defining finance, actuarial and risk functions, establishing the operating model, tools and capabilities to support the business use of the new metrics that are emerging.

B ***Operational Efficiency Path***
Some firms are building the foundation necessary to support future transformation efforts to finance in parts, with the focus on addressing compliance requirements today.

C ***Compliance Path***
Some firms may seek to **address the new requirements in a low-cost compliance manner**, either through work-around solutions or by increasing resources.

Key questions?

- What is the potential business impacts of the changes?
- What is your implementation strategy?
- What is the expected budget for the implementation?
- Do you have sufficient internal and external resources with the appropriate skills required?
- Are there synergies and cost benefits of integrating existing technology and transformation projects?
- How do you maximize the return on investment to meet compliance to deliver greater capabilities and insights?

Minimum compliance vs maximum benefits technology design

Insurers may opt for a minimum compliance or maximum benefits approach or somewhere in between this wide spectrum when approaching FASB LDTI. The following highlights key components of a chosen approach.

Minimum Compliance

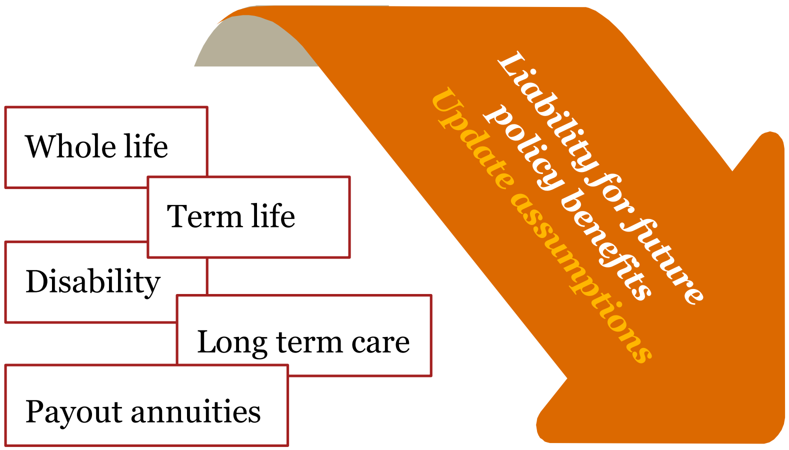
- Reprogram actuarial applications to accommodate changes in DAC and liability for future policy benefits
- Extend existing experience study and assumption development process for traditional fixed long-duration and limited-payment contracts
- Incorporate additional products in scope for Market Risk Benefits into existing fair value valuation process
- Use spreadsheets and other manual process to address additional disclosure requirements

Maximum Benefits

- Leverage existing data extracts while increasing data granularity through use of data lakes and supplement existing data with external sources
- Drive business insight & value through the use of data visualization and advanced analytics
- Achieve greater operational efficiency, control and consistency through RPA & machine learning
- Improve FP&A & reporting capability including integration with data warehouse & data lakes
- Improve the controls and reconciliation capability with new systems including balance sheet attestation tools and data quality reporting layers
- Invest in cloud infrastructure that provides a flexible, scalable and cost efficient environment

Liability for future benefits

FASB Long-duration targeted improvements – Liability for future policy benefits



**Participating contracts are excluded*

Measurement assumptions

- Assumptions must be reviewed/updated at least annually on retrospective basis (but updating other expenses is policy choice)
- No more PAD
- Premium deficiency test replaced with net premium ratio capped at 100%
- Annual cohort limitation: contracts from different original issue years cannot be grouped

Discount rate assumptions

- Upper-medium grade (low credit risk) fixed-income instrument yield (single "A")
- Discount rate updated at each reporting date through OCI

Transition

- "Modified retrospective" transition approach
  - Pivoting off of the balance at transition

$$\frac{\text{PV future benefits - existing 1/1/19 liability}}{\text{PV future gross premiums}}$$

= revised net premium ratio for 2019

  - Discount rate NOT reset for purposes of calculating future net premiums and interest accretion at transition
  - Same annual cohort limitation applies
- Option to elect a "full retrospective" transition approach if necessary criteria are met

Liability for future benefits

Data, systems and process considerations

Data Gathering, Storage & Preparation

- Additional data needs for the new standard must be collected early for the purpose of restatement in prior periods
- Policies will need to be tagged in system into cohorts based on issue year, reporting segments, product features and other characteristics.
- Actual experience, e.g. premiums, claims, etc., needs to be available at a granular level (i.e. issue year & incurred year) for the purpose of retrospective unlocking.
- ETLs from admin systems may require redesign to handle new data requirements and feeds to downstream systems
- New standard may require longer retention period given retrospective unlocking

Experience Studies & Assumption Setting

- A more robust annual experience study, assumption setting, review and (if needed) update process will need to be developed to support unlocking of assumptions in line with accounting policies.
- External data sources may be needed to support assumption setting for blocks with low credibility of internal data
- At-inception discount rates & current valuation model needs to be stored in the data warehouse in anticipation for the new reporting cycle.
- Expense extracts will need to separate non-level termination and. other expenses such as maintenance expense.
- Potential need to establishment of an Assumption Repository to keep track of current & historical assumptions and improve assumption management and automate experience studies

Calculations

- Existing actuarial platforms will need to be upgraded to LDTI versions or converted to other LDTI compliant platforms.
- Consideration should be given to accelerating the migration of legacy systems if possible
- Updates to the input files (i.e. inforce files, assumption tables, actuals etc.) will be needed for LDTI compliant models to support required calculations
- LDTI requires a significant increase in data volumes and processing required during reporting periods. Consideration should be given to the extent that workflow automation tools
- Consideration should be given to compute requirements (e.g. server or cloud capacity needs)

Transition

- The modified retrospective transition approach will need the current reserve balance available at the cohort level
- Companies may need to refine its loss recognition assumptions for year-end 2018 to better position themselves at transition which will have associated process and data impacts

Market risk benefits

FASB Long-duration targeted improvements - Market risk benefits (MRBs)

Measurement

- Fair value with changes through income
  - Except that changes to instrument-specific credit risk recognized in OCI

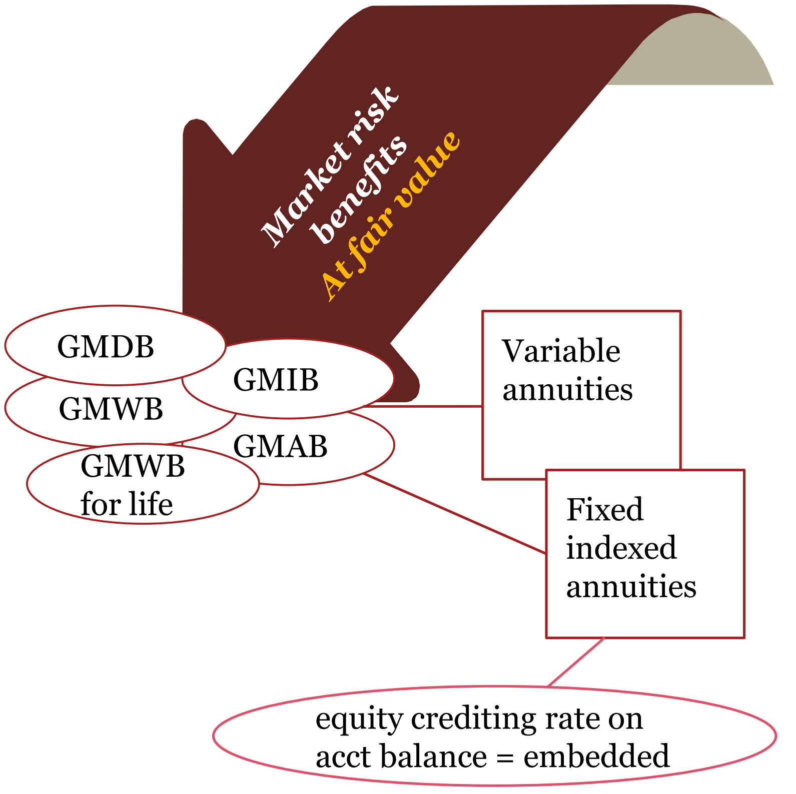
Scope

IN

- All types of GMXBs:
  - In variable annuity separate accounts
  - In general account annuities
- Annuitization interest rate guarantees if other than nominal

OUT

- Minimum interest rate guarantees on account balance
- Variable life insurance benefits
- No lapse guarantees on universal life



Transition

- **Retrospective application:** *If assumptions in prior period unobservable or otherwise unavailable and cannot be independently substantiated (e.g., to calculate "attributed fee" at contract inception), may use hindsight in determining assumptions*

Market risk benefits

Data, systems and process considerations

Data Gathering, Storage & Preparation

- Given the need to estimate the attributed fee ratio at contract inception and the requirement of performing retrospective application at transition, companies will likely need to spend significant efforts on data gathering.
- Unlike SOP 03-1 reserve calculations that are typically performed at a cohort level, no such cohort requirement exists for the fair value calculation, potentially requiring ETL to be modified.

Experience Studies & Assumption Setting

- Risk neutral scenarios are required for fair value calculations. This is different from the real world scenarios under SOP 03-1 and may require new data fields and calibration processes to be established
- Processes and data may need to be developed for assumptions for items such as allowance for non-performance risk, risk margin, etc.

Calculations

- For companies that do not report fair value currently, new actuarial and finance process needs to be set up. Separation of impact of non-performance risk will be required.
- Compared to SOP 03-1 reserves which is a retrospective calculation, fair value is prospective calculation with the attributed fee ratio locked in at issue.
- Additional model runs need to be performed, automated and stored to do a full attribution analysis for the fair value calculation.

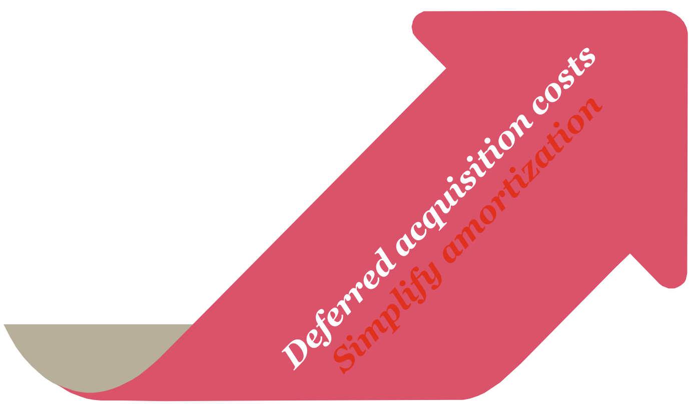
Transition

- Retrospective application is required at transition, putting burdens on companies to collect information/data back to the contract inception date.
- Companies are allowed to use hindsight to measure fair value components to the extent assumptions in prior periods are unobservable or otherwise unavailable. Areas where hindsight can be applied (and approach thereon) likely will require discussions and judgement.

DAC

FASB Long-duration targeted improvements – DAC amortization

Year	Insurance in force	Amortization
2021	$1,000	16
2022	1,000	16
2023	1,000	16
2024	1,000	16
2025	1,000	16
Total	5,000	
DAC	80	80
Amortization rate	1.6%	



Scope

- All long-duration insurance contracts (except investment contracts that use effective yield method)

DAC amortization

- Principles-based amortization: constant level basis over expected life of contract, independent of profit emergence
- No impairment test
- No interest accretion
- Accrue and amortize acquisition costs only as incurred

What about other balances similar to DAC ?

- Deferred sales inducement costs and U/L unearned revenue liability
- Other balances often amortized like DAC (business combination intangibles and cost of reinsurance)?

Transition

- Apply new amortization method to existing DAC balances at transition date (after removing shadow DAC adjustment from AOCI)
- Except where full retrospective method adopted for liability for future policy benefits.

DAC
Data, systems and process considerations

Data Gathering, Storage & Preparation

- New amortization basis and logic will need to be developed for both FAS 60 and FAS 97 products. This will result in new data feeds from source systems to DAC calculation engines.
- Data warehouse should store expenses to be capitalized, actual persistency information and updated assumptions which are inputs to the actuarial valuation model

Experience Studies & Assumption Setting

- DAC amortization requires updated assumptions to be reflected, which will require revised data feeds from sources to the DAC calculation engine

Calculations

- Typically DAC is currently calculated for many firms within EUCs. Consideration should be given to migrate this calculation into more robust platforms (e.g. actuarial valuation systems, data warehouse, and/or finance systems)
- Calculation for other balances may need to change depending on policy policies (e.g. adopt the same methodology/amortization basis for CoR, VOBA, etc)

Transition

- Existing DAC (and similar balances) retained, except that AOCI relating to "shadow DAC" (and other similar balances) would be reversed and recorded as an adjustment to the DAC (and other similar balances) at the transition date.

Presentation and disclosure

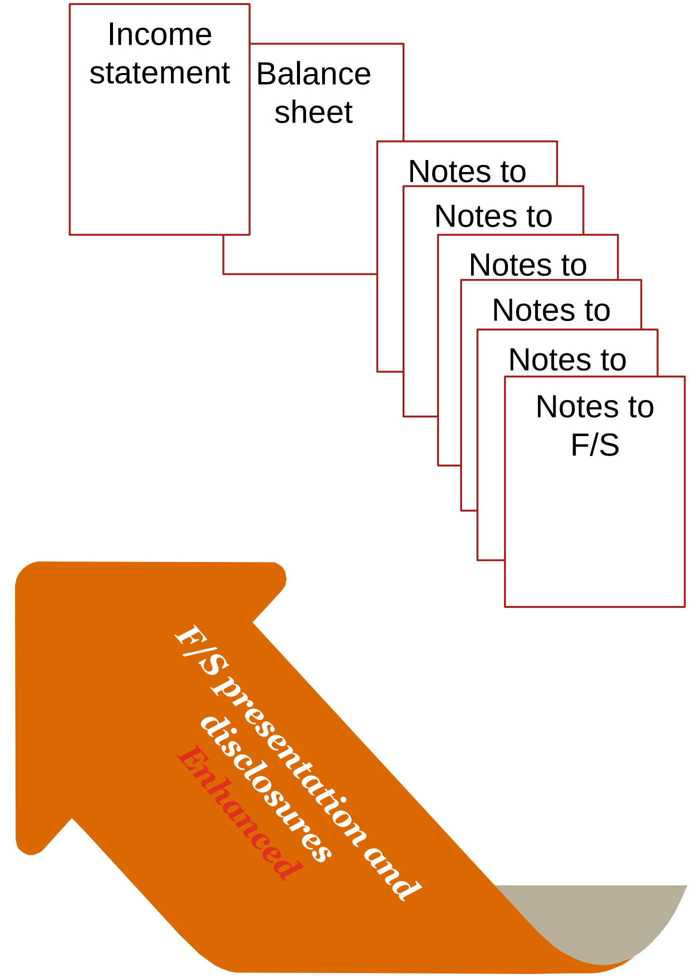
FASB Long-duration targeted improvements - Presentation and disclosure

Presentation requirements

- Impact of updating assumptions for liability for future policy benefits separately presented in P/L
- MRB separately presented in B/S with changes in fair value separately presented in P/L and OCI

Disclosure requirements

- For annual and interim reporting periods:
  - Disaggregated rollforwards and reconciliations to B/S amounts
- For annual reporting periods and as required under ASC 270 for interim reporting:
  - Information about inputs, judgments, assumptions and methods, changes during the period, and effect of those changes
  - Qualitative and quantitative discussion about adverse development
  - Premium deficiency methodology utilized and the liability recorded for participating insurance contracts (including closed block) and U/L contracts



Transition

- Disaggregated rollforwards of pre-adoption transition date balances to post-adoption transition date balances
- Qualitative and quantitative information about the effect of transition adjustments

Presentation, disclosure and transition

Data, systems and process considerations

Data Gathering, Storage & Preparation

- ETLs to handle additional data feeds and granularity across actuarial, data and finance systems to reporting and consolidation tools to support new disclosure requirements

Experience Studies & Assumption Setting

- New working day timetables will need to be developed with supporting underlying processes and control frameworks established
- LDTI may create additional pressure on the reporting timeline. Potential to explore workflow management tools and additional automation tools
- Firms may wish to leverage automation tools to support generation of disclosures write ups
- Firms may wish to consider rationalizing existing reports and leveraging enhance BI/visualization tools to deliver greater business insights

Calculations

- New processes and capabilities within actuarial platforms will need to be established to perform attribution (e.g. functionality for batch runs)
- It is likely that actuarial model runs will need to be automated to provide greater production efficiencies to meet reporting timetables
- Tweak to accounting rules engine and CoA will be needed to capture the changes in presentation and granularity (e..g. presentation in OCI)

Transition

- Updated and/or additional roles will be required to reflect changes in the accounting policies, data, processes and systems
- Control framework will need to be updated to reflect the new processes
- Enhancements to components of the data management framework are expected to reflect the associated changes to the underlying data and systems (e.g. data dictionary, metadata management, data governance etc)

Further information

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