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# VA Reform - Implications on ALM

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SOCIETY OF ACTUARIES®

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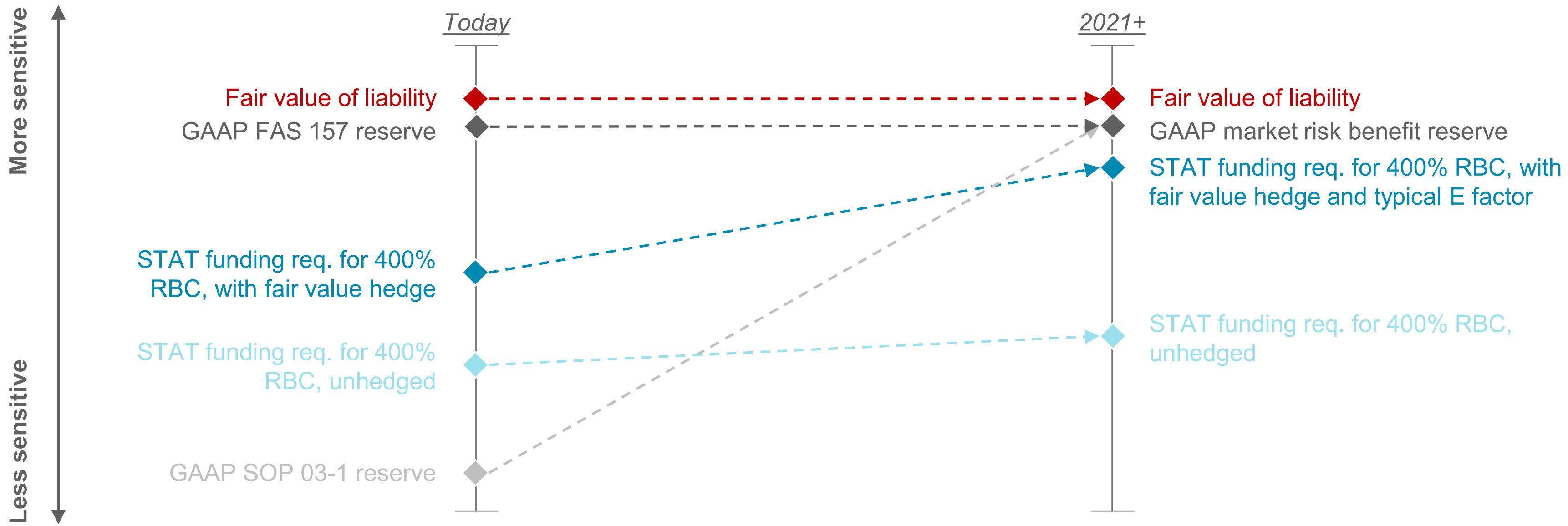
# VA valuation lenses are converging after 2021

**Market sensitivity of liability valuation**




**Current state**: difficult to hedge extensively on FV basis given divergence in market sensitivity across lenses

**After 2021**: all lenses approach or accommodate FV; need compelling strategic reason not to hedge on FV basis

# Many VA ALM practices currently exist, falling broadly into six archetypes

| | | |
|---|---|---|
| 1 | **Full economic** | • Aims to extinguish most market risks associated with guarantees<br>• Typically a two-Greek or three-Greek dynamic replication program |
| 2 | **Partial economic** | • Similar to full economic, but insurer has chosen to leave certain risks open – typically rho given belief in IR mean reversion or delta to capture equity risk premium |
| 3 | **Earnings-only** | • Aims to immunize GAAP or IFRS earnings<br>• Hedge program oriented around FAS 157 vs. SOP 03-1 accounting treatment |
| 4 | **Earnings with statutory overlay** | • Aims to immunize GAAP or IFRS earnings, but uses a secondary overlay or “macro-hedge” program to hedge residual risks based on statutory sensitivities |
| 5 | **Statutory-only** | • Aims only to protect statutory balance sheet without consideration of other valuation lenses; hedge execution and instruments selected to optimize statutory framework |
| 6 | **Statutory-focused with economic constraint** | • Aims primarily to protect the statutory balance sheet without consideration of GAAP or IFRS, but with certain caps on economic risks retained – e.g., unhedged rho exposure |

# New statutory framework will accommodate fair value-based hedging

## Asset accounting practice (SSAP 108)
Elective

**Steps under the practice**

- Implement hedge accounting for interest rate derivatives
- Mismatches capitalized as deferred gains/losses; amortized over 10 years

**Implications**

- Aligns immediate sensitivity of IR hedges with VM-21 reserve
- Carries no immediate impact on statutory B/S upon implementation

**Requirements**

- Requires derivatives for which hedge accounting is selected to be part of a highly-effective CDHS

## Reserving practice (VM-21)
Required, with many elective elements

**Steps under the practice**

- Refine reflection of hedging within VM-21 reserve calculation
- Adopt low “error factor” for max hedge credit (up to 95%)
- Implement revised Standard Scenario

**Implications**

- Turns VM-21 reserve mostly into economic reserve
- Likely triggers material one-time impact upon implementation

**Requirements**

- CDHS requirements and hedge effectiveness demonstration

## RBC calculation methodology
Required

**Steps under the practice**

- Normal VA reform implementation

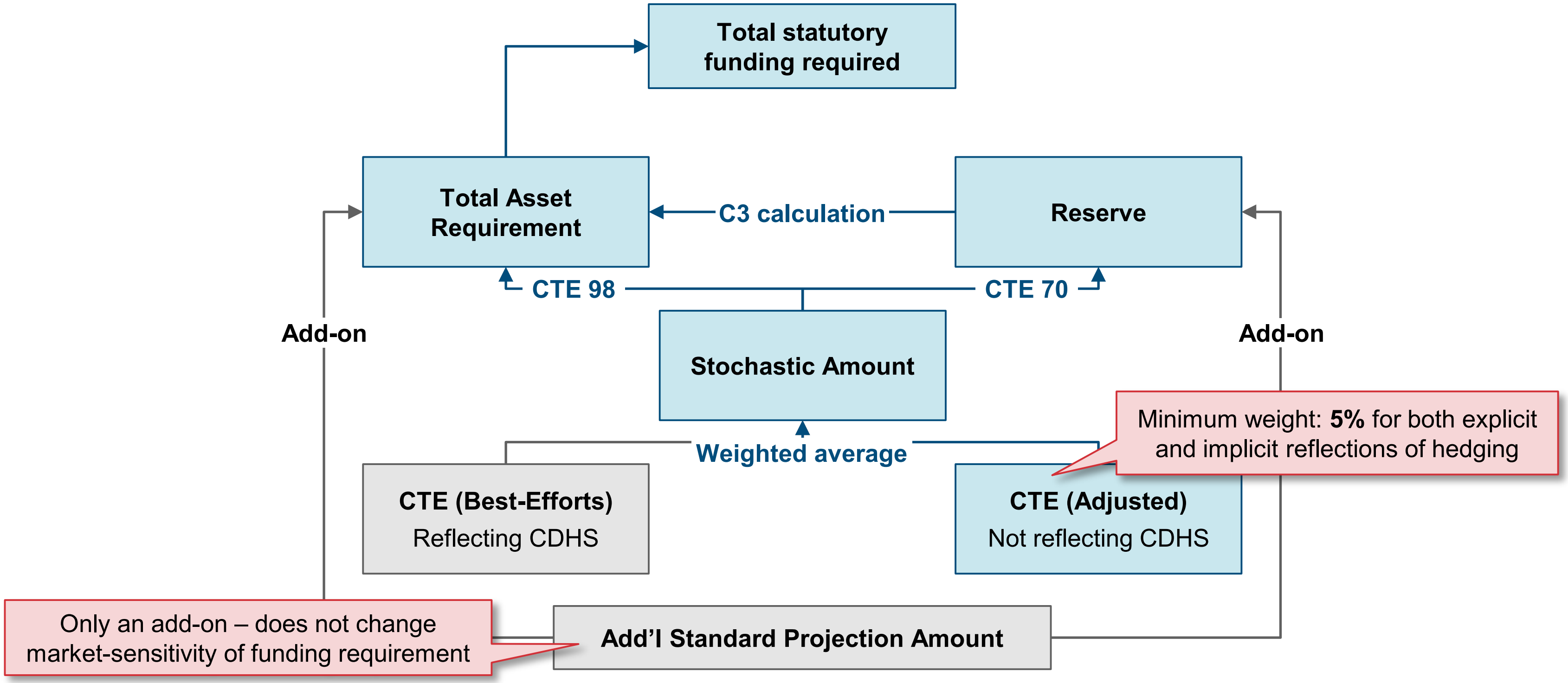
**Implications**

- Shrinks but does not remove sensitivity gap between economics and STAT funding (reserves plus target capital)
- Likely carries material immediate impact on balance sheet – but CDHS reflection may be optimal solution to mitigate

**Requirements**

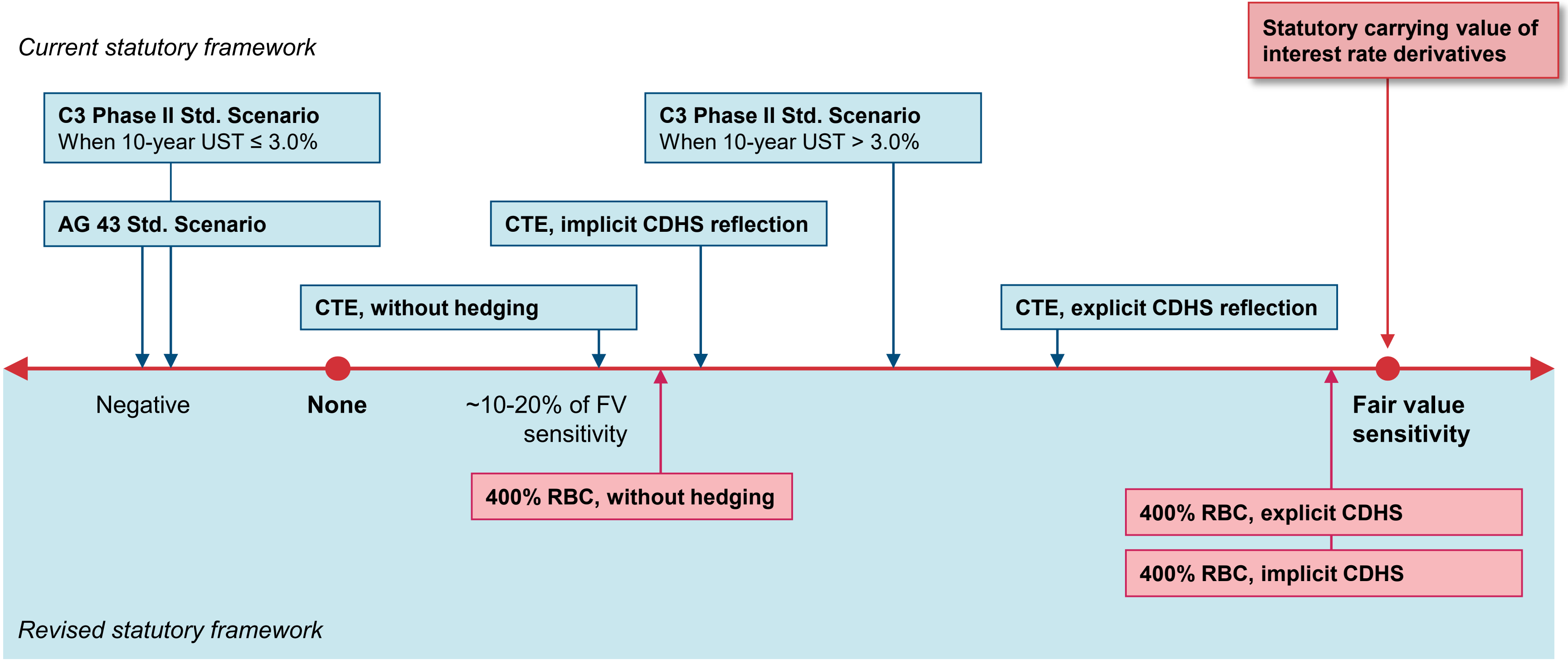
- None – part of normal VA reform implementation

# The "error factor" is a key parameter in the revised statutory framework



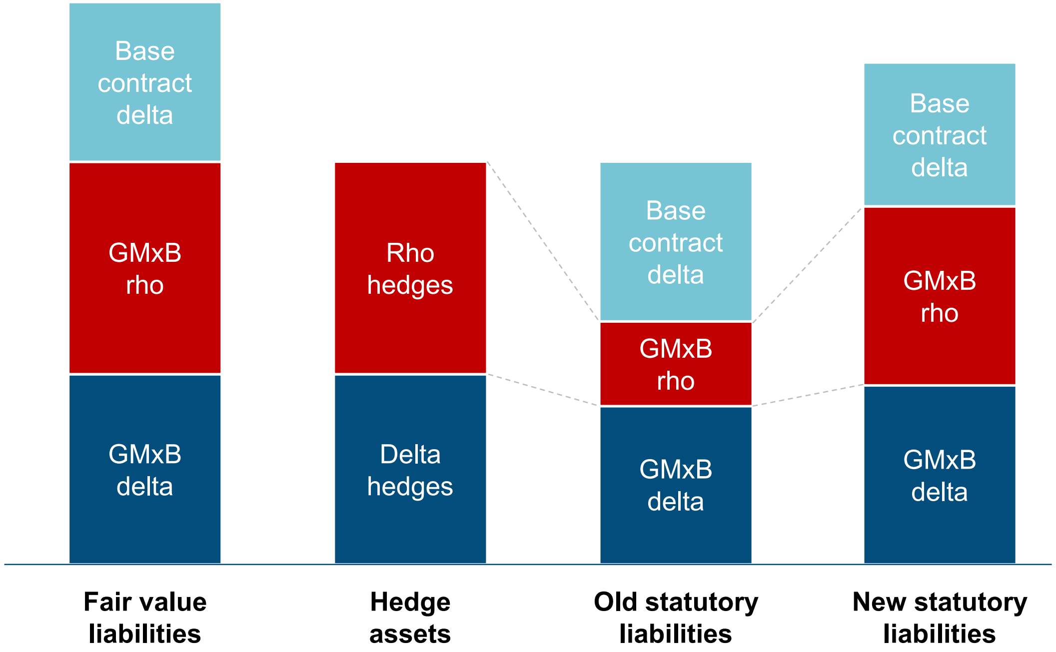
# New statutory framework will affect interest rate hedging the most …

**Interest rate sensitivity of statutory liabilities**



# … but there may also be a need to increase tail equity hedging

**Change in assets and liabilities, across valuation lenses, in a typical “Risk Appetite Statement” recession shock**




- Equity risk on VA base contract is seldom hedged, despite being part of the statutory reserve
- Typical “Risk Appetite Statement” shocks mimic the 2008 recession, with declining equity and interest rates
- For a fair value-based hedge program, IR over-hedging on a statutory basis can “subsidize” equity under-hedging
- After VA reform, depending on CDHS, fair value-based IR hedging may no longer be statutory over-hedging
- Equity under-hedging on base contract can therefore have a larger impact in the “Risk Appetite Statement” shocks

# Future VA ALM practices will likely converge towards two archetypes

**Public ownership**

- Primarily valuation lens is GAAP or IFRS, both of which will effectively be fair value-based
- Fair value-based delta and rho hedging for guarantees
- Some statutory optimization for companies looking to retain base contract equity exposure
- Vega hedging depend on accounting policy re: use of market-implied volatility for GAAP or IFRS reserve

**Private ownership**

- Primary valuation lens is US statutory; high equity sensitivity, low interest rate and vega sensitivity
- Statutory-focused hedging; substantial open rho risk, including both risk on reinvestment yield (“discount rate”) and cost of future equity hedging (“SA returns”)
- May orient towards tail protection-oriented ALM programs in lieu of first dollar protection

- **Increased transfer of VA liability from public ownership to private ownership likely**
  - Landmark transactions have defined new transaction possibilities
  - Formation of VA acquisition vehicles and increasing demand for VA as fixed annuity trade becomes even more crowded
  - Good supply of legacy VA portfolios that existing carriers are seeking to dispose, accelerated by GAAP and IFRS reforms (fewer “valuation issues” from book value impact – if the impact is going to happen anyway)

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