Variable Annuity Statutory Reserves and Capital Reform Implementation Considerations

Ying-Ying Lee, AVP & Actuary

November 19, 2019

Evolution of principal based approach

C3P2
2006

AG43
December 2009

VM-21
January 2020

- Aim to capture a holistic view of the products and investment/hedging strategies behind managing the products

- Encourage strong risk management

National Association of Insurance Commissioners actions

- In 2015, the National Association of Insurance Commissioners (NAIC) commissioned Oliver Wyman to identify and mitigate the motivations for insurers to engage in captive reinsurance
- In 2016, NAIC commissioned Oliver Wyman to do a quantitative impact study (QIS) to recommend structural revisions to the existing framework. OW presented the recommendation in August 2016
- Recommendation from the industry and Oliver Wyman to undertake QIS II in 2017 for impact testing and QIS II study was presented in December 2017 meeting
- In 2018, NAIC working groups considered comments on exposed framework changes

AG43/C3P2 issues

- Motivation for variable annuity insurers to use captive reinsurance
- Inconsistency in stochastic reserves and standard scenario amount methods result in misaligned reserve change and reinsurance credit change with market sensitivities
- Standard scenario on seriatim basis with prescribed assumptions was designed to act as a floor reserve but too often becomes the winning reserve methodology
- Mismatch in A-L between hedging instruments and statutory liabilities result in non-economic surplus volatility
- Inconsistent E factor definition in reserves and capital
  - E factor or reserve is an effective factor on the level of model accuracy
  - E factor for capital is an error factor

VM-21 and C-3 risk based capital reform changes

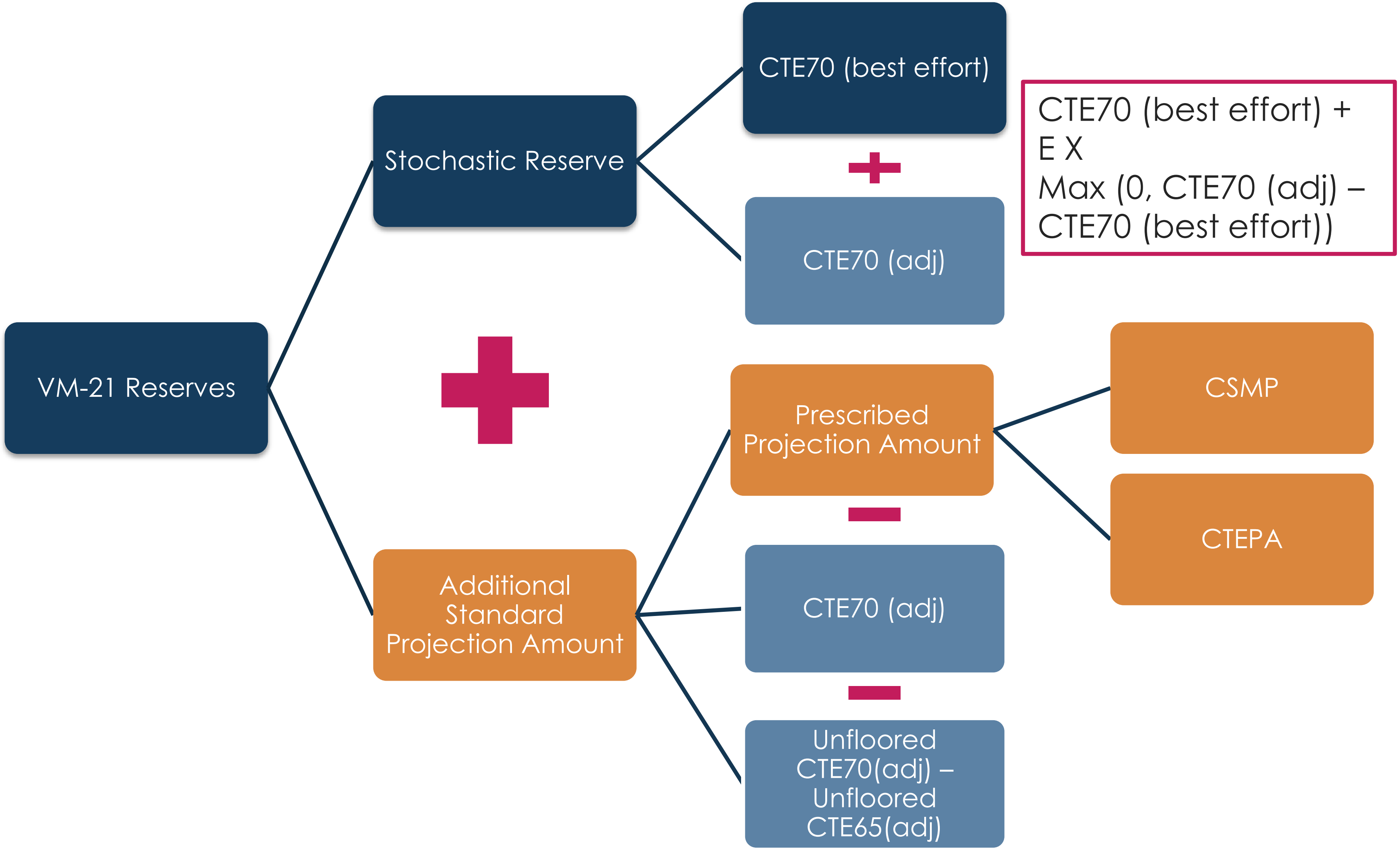
Align reserves and capital calculation and reduce non-economic volatility in statutory capital charge

- Refine the reserve floor to be more consistent with conditional tail expectation framework (CTE) and reflect industry experience
- Remove some disincentives to hedge
- Allow more hedging credit for modeled clearly defined hedging strategy (CDHS)

Promote consistency with PBR requirement for other products and across companies

- Use of general account asset modeling, AAA scenario generator and principal based reserve (PBR) reporting requirements

VM-21 reserves



VM-21/C-3 risk based capital implementation considerations

- Complexity in implementing standard projection amount and withdrawal delay cohort method
- Flexibility in defining risk adjusted measure (R) in allocation of aggregate reserve (pre and post reinsurance ceded reserves) to contract level
- Provide hedging back-testing to support E-factor
- Increase PBR reporting consistency and disclosure requirement
  - Prescribed scenario generator and spreads
- Decide on when to adopt and over how many years
  - Early adoption in December 2019
  - Full adoption on January, 1 2020
    - Phase in over three years or seven years
- Impact on tax reserve 807f

C-3 risk based capital

C-3 RBC

MTA: 25% X
[(CTE98 + Add. Amount* – Stat Rx) X (1- FIT)
- (Stat Rx – Tax Rx) X FIT]

STR: 25% X
(CTE98 at + Add. Amount* X (1-FIT)
– Stat Rx)

- Align C-3 (RBC) CTE with reserve in pre-tax formula and discounting rates
- Use same hedging error factor as reserve
- Remove C-3 RBC standard scenario amount
- Smooth C-3 RBC charge not total asset requirement

* Additional standard projection amount in reserve calculation

VM-21 implementation resources and next steps

- ACLI variable annuity PBR user group forum
- Academy of Actuaries working group on VM21/C-3 RBC practice notes (updated expected in 2020)
- Industry experience studies: SOA, Ruark and other consultants, VM-50 (PBR experience reporting requirement)

THANK YOU!