Nate Worrell - Director Customer Success

# GAAP EARNINGS CHALLENGES - SEAC 2024

Aggregation
Sum things happening here

Limitation
Ceilings and floors and opening doors

Fluctuation
The only constant is change

Attribution
I demand an explanation!

DISconnection/REconnection
Claims and first dates

**DAC**Keeping it in line

## Aggregation

## **Cohort challenges**

- Don't know liability at individual level
- Subsidization of policies
- Meaningful reporting groups (subcohorts)
- Reinsurance Treaties
- PRT deals
- Disabled Lives

- Using FAS60 as proxy
- Policy level allocations
- Reporting runs vs management runs
- Study the aggregation affect
- Follow FAS97 approaches

# **Example of Cohort Impact**

COHORT	Policy	PV Gross Prem	PV Val P	Policy K	FAS 60 Ben Rs
Whole Life 2014	WL-0017	242,677.34	134,228.27	55%	70,278.88
Whole Life 2014	WL-0028	105,336.70	82,855.68	79%	46,861.60
Whole Life 2014	WL-0049	128,959.95	100,914.09	78%	48,444.07
Whole Life 2014	TOTAL	476,974.00	317,998.03	<b>67</b> %	165,584.54

COHORT	Policy	PV Gross Prem	PV Val P	Cohort K	PROXY Res
Whole Life 2014	WL-0017	242,677.34	161,792.71	67%	42,714.43
Whole Life 2014	WL-0028	105,336.70	70,227.86	67%	59,489.42
Whole Life 2014	WL-0049	128,959.95	85,977.46	67%	63,380.70
Whole Life 2014	TOTAL	476,974.00	317,998.03	67%	165,584.54

- More noise with onerous policies
- Other noise due to methodology/discounting





## Limitations

### Ceiling (100% K-factor) and Floors (No negative LFPB)

- Can skew financial impact
- Adverse mortality, but no change in reserves?
- Can show up with certain product types
- No more loss recognition (always in loss recognition)

- Produce unfloored and uncapped results
- Produce line items for effective of flooring/capping
- Sub-cohort analysis to manage target block profitability

## **Extra Information**

- View at cohort and sub-cohort levels
- Projections and Point in Time
- Isolate change in liability vs OCI

## [-] US GAAP ASU 2018-12 Pricing Cohort - 2017WL -

## [-] Liability For Future Policy Benefits - Period |

- Period End LFPB K-factor
  - LFPB K-factor uncapped
  - LFPB at DR
  - Unfloored LFPB at locked DR
  - Unfloored LFPB at DR

### **Fluctuations**

### No Longer Apples to Apples

- 'Basis' changes from new assumptions
- Updates to Net Premium Ratio due to actuals
- Multiple moving pieces

#### **Potential solutions**

01

Take a period specific point of view (lock k-factor)

02

Limit movements to one time per year

03

Build a walkthrough approach

## **Attributions and Allocations**

#### **Disclosures and Roll-forwards**

- Done on component basis (PVB and PVP) not liability basis
  - MRB for annuities
- DAC (over lifetime) and LFPB (reflects history) disconnect
- Disclosures isolate
  - Assumptions (but not granularly)
  - Experience
  - New business
- Interest rates separately disclosed
- Actuarial vs accounting

- Attribution runs
  - Order matters
  - Covariance
- Source of Earnings Approach
  - Building blocks
- Drill down capabilities
  - A to E

#### **Attribution Approaches (Assumptions)**

#### **Source of Earnings – use constant k**

#### **Accumulative**

- Period Start
- > PS + New Mortality (Q)
- > PS + Q + New lapse (W)
- > PS + Q + W + Interest
- Period End

#### Incremental

- Period End (swap mortality only)
- Period End (swap lapse only)
- Period End (swap interest only)
- > Covariance

#### **Expected**

- Claims (from revalued)
- Release of PV on expected decrement
  - Split by decrement

#### **Actual**

- Claims (from actuals)
- Release of PV on actual decrement
  - > Split by Decrement

To reconcile to GAAP income need to consider expenses and commission, investment income and interest.

## Run rabbit run

## 5-10x more runs per valuation cycle

Approach										No. of Runs
FAS 60	Period End									1
LDTI Disclosure	Period Start	Assumption Change	New Business	Experience Change	Discount Rate Change					5
Disclosure + Attribution	Period Start	Assumption Change	Mortality Update	Lapse Update	New Business	Experience Change	Death Experience	Lapse Experience	Discount Rate Change	9+
Disclosure + SOE	Period Start	Revalued = Basis for SOE	New Business	Experience (actuals)	Discount Rate Change					5

## **DISconnection/REconnection**

#### **Disabled Lives and Reinsurance**

#### **Disability and Long Term Care**

- No separate liability for incurred claims, IBNR, ICOS, etc.
  - How to allocate IBNR to cohorts
- No separate assumptions for projection recovery rates
  - Seriatim disabled may vary
- Claim costs? Negative ALR?

#### Reinsurance

- Treaties are different 'cohorts'
  - New Locked Rates
- COR vs Ceded LFBP

- Sub-cohorts
- Isolate disabled lives only
  - Claim cohorts vs Reporting Cohorts
- Building blocks approach
- Drill down capabilities

## **DAC**

## **Getting it straight**

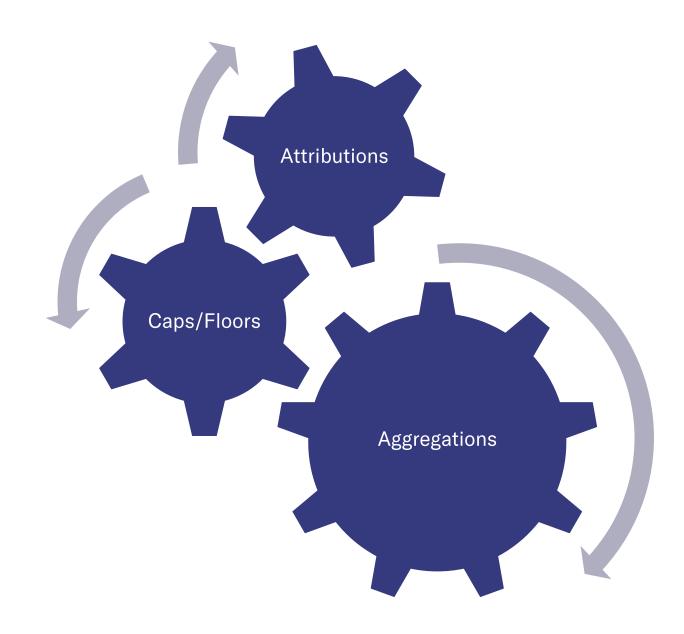
- Amortization basis changes alter slope of 'straight line'
- Isolating Deferable Costs
- Grouped vs Seriatim approaches

- Independent analysis
- Amortization Base Change vs. Scheduled Change

# Putting it all together

Potential to use artificial intelligence to narrate all movements?

Focus on biggest movers



© 2024 Moody's Corporation, Moody's Investors Service, Inc., Moody's Analytics, Inc. and/or their licensors and affiliates (collectively, "MOODY'S"). All rights reserved.

CREDIT RATINGS ISSUED BY MOODY'S CREDIT RATINGS AFFILIATES ARE THEIR CURRENT OPINIONS OF THE RELATIVE FUTURE CREDIT RISK OF ENTITIES, CREDIT COMMITMENTS, OR DEBT OR DEBT-LIKE SECURITIES, AND MATERIALS, PRODUCTS, SERVICES AND INFORMATION PUBLISHED OR OTHERWISE MADE AVAILABLE BY MOODY'S (COLLECTIVELY, "MATERIALS") MAY INCLUDE SUCH CURRENT OPINIONS. MOODY'S DEFINES CREDIT RISK AS THE RISK THAT AN ENTITY MAY NOT MEET ITS CONTRACTUAL FINANCIAL OBLIGATIONS AS THEY COME DUE AND ANY ESTIMATED FINANCIAL LOSS IN THE EVENT OF DEFAULT OR IMPAIRMENT. SEE APPLICABLE MOODY'S RATING SYMBOLS AND DEFINITIONS PUBLICATION FOR INFORMATION ON THE TYPES OF CONTRACTUAL FINANCIAL OBLIGATIONS ADDRESSED BY MOODY'S CREDIT RATINGS. CREDIT RATINGS DO NOT ADDRESS ANY OTHER RISK, INCLUDING BUT NOT LIMITED TO: LIQUIDITY RISK, MARKET VALUE RISK, OR PRICE VOLATILITY. CREDIT RATINGS, NON-CREDIT ASSESSMENTS ("ASSESSMENTS"), AND OTHER OPINIONS INCLUDED IN MOODY'S MATERIALS ARE NOT STATEMENTS OF CURRENT OR HISTORICAL FACT. MOODY'S MATERIALS MAY ALSO INCLUDE QUANTITATIVE MODEL-BASED ESTIMATES OF CREDIT RISK AND RELATED OPINIONS OR COMMENTARY PUBLISHED BY MOODY'S ANALYTICS, INC. AND/OR ITS AFFILIATES. MOODY'S CREDIT RATINGS, ASSESSMENTS, OTHER OPINIONS AND MATERIALS DO NOT CONSTITUTE OR PROVIDE INVESTMENT OR FINANCIAL ADVICE, AND MOODY'S CREDIT RATINGS, ASSESSMENTS, OTHER OPINIONS AND MATERIALS ARE NOT AND DO NOT PROVIDE RECOMMENDATIONS TO PURCHASE, SELL, OR HOLD PARTICULAR SECURITIES. MOODY'S CREDIT RATINGS. ASSESSMENTS, OTHER OPINIONS AND MATERIALS DO NOT COMMENT ON THE SUITABILITY OF AN INVESTMENT FOR ANY PARTICULAR INVESTOR. MOODY'S ISSUES ITS CREDIT RATINGS, ASSESSMENTS AND OTHER OPINIONS AND PUBLISHES OR OTHERWISE MAKES AVAILABLE ITS MATERIALS WITH THE EXPECTATION AND UNDERSTANDING THAT EACH INVESTOR WILL, WITH DUE CARE, MAKE ITS OWN STUDY AND EVALUATION OF EACH SECURITY THAT IS UNDER CONSIDERATION FOR PURCHASE, HOLDING, OR SALE.

MOODY'S CREDIT RATINGS, ASSESSMENTS, OTHER OPINIONS, AND MATERIALS ARE NOT INTENDED FOR USE BY RETAIL INVESTORS AND IT WOULD BE RECKLESS AND INAPPROPRIATE FOR RETAIL INVESTORS TO USE MOODY'S CREDIT RATINGS, ASSESSMENTS, OTHER OPINIONS OR MATERIALS WHEN MAKING AN INVESTMENT DECISION. IF IN DOUBT YOU SHOULD CONTACT YOUR FINANCIAL OR OTHER PROFESSIONAL ADVISER.

ALL INFORMATION CONTAINED HEREIN IS PROTECTED BY LAW, INCLUDING BUT NOT LIMITED TO, COPYRIGHT LAW, AND NONE OF SUCH INFORMATION MAY BE COPIED OR OTHERWISE REPRODUCED, REPACKAGED, FURTHER TRANSMITTED, TRANSFERRED, DISSEMINATED, REDISTRIBUTED OR RESOLD, OR STORED FOR SUBSEQUENT USE FOR ANY SUCH PURPOSE, IN WHOLE OR IN PART, IN ANY FORM OR MANNER OR BY ANY MEANS WHATSOEVER, BY ANY PERSON WITHOUT MOODY'S PRIOR WRITTEN CONSENT. FOR CLARITY, NO INFORMATION CONTAINED HEREIN MAY BE USED TO DEVELOP, IMPROVE, TRAIN OR RETRAIN ANY SOFTWARE PROGRAM OR DATABASE, INCLUDING, BUT NOT LIMITED TO, FOR ANY ARTIFICIAL INTELLIGENCE, MACHINE LEARNING OR NATURAL LANGUAGE PROCESSING SOFTWARE, ALGORITHM, METHODOLOGY AND/OR MODEL.

MOODY'S CREDIT RATINGS, ASSESSMENTS, OTHER OPINIONS AND MATERIALS ARE NOT INTENDED FOR USE BY ANY PERSON AS A BENCHMARK AS THAT TERM IS DEFINED FOR REGULATORY PURPOSES AND MUST NOT BE USED IN ANY WAY THAT COULD RESULT IN THEM BEING CONSIDERED A BENCHMARK.

All information contained herein is obtained by MOODY'S from sources believed by it to be accurate and reliable. Because of the possibility of human or mechanical error as well as other factors, however, all information contained herein is provided "AS IS" without warranty of any kind. MOODY'S adopts all necessary measures so that the information it uses in assigning a credit rating is of sufficient quality and from sources MOODY'S considers to be reliable including, when appropriate, independent third-party sources. However, MOODY'S is not an auditor and cannot in every instance independently verify or validate information received in the credit rating process or in preparing its Materials.

To the extent permitted by law, MOODY'S and its directors, officers, employees, agents, representatives, licensors and suppliers disclaim liability to any person or entity for any indirect, special, consequential, or incidental losses or damages whatsoever arising from or in connection with the information contained herein or the use of or inability to use any such information, even if MOODY'S or any of its directors, officers, employees, agents, representatives, licensors or suppliers is advised in advance of the possibility of such losses or damages, including but not limited to: (a) any loss of present or prospective profits or (b) any loss or damage arising where the relevant financial instrument is not the subject of a particular credit rating assigned by MOODY'S.

To the extent permitted by law, MOODY'S and its directors, officers, employees, agents, representatives, licensors and suppliers disclaim liability for any direct or compensatory losses or damages caused to any person or entity, including but not limited to by any negligence (but excluding fraud, willful misconduct or any other type of liability that, for the avoidance of doubt, by law cannot be excluded) on the part of, or any contingency within or beyond the control of, MOODY'S or any of its directors, officers, employees, agents, representatives, licensors or suppliers, arising from or in connection with the information contained herein or the use of or inability to use any such information.

NO WARRANTY, EXPRESS OR IMPLIED, AS TO THE ACCURACY, TIMELINESS, COMPLETENESS, MERCHANTABILITY OR FITNESS FOR ANY PARTICULAR PURPOSE OF ANY CREDIT RATING, ASSESSMENT, OTHER OPINION OR INFORMATION IS GIVEN OR MADE BY MOODY'S IN ANY FORM OR MANNER WHATSOEVER.

Moody's Investors Service, Inc., a wholly-owned credit rating agency subsidiary of Moody's Corporation ("MCO"), hereby discloses that most issuers of debt securities (including corporate and municipal bonds, debentures, notes and commercial paper) and preferred stock rated by Moody's Investors Service, Inc. have, prior to assignment of any credit rating, agreed to pay to Moody's Investors Service, Inc. for credit ratings opinions and services rendered by it. MCO and Moody's Investors Service also maintain policies and procedures to address the independence of Moody's Investors Service credit ratings and credit rating processes. Information regarding certain affiliations that may exist between directors of MCO and rated entities, and between entities who hold credit ratings from Moody's Investors Service, Inc. and have also publicly reported to the SEC an ownership interest in MCO of more than 5%, is posted annually at <a href="https://www.moodys.com">www.moodys.com</a> under the heading "Investor Relations — Corporate Governance — Charter Documents - Director and Shareholder Affiliation Policy."

Moody's SF Japan K.K., Moody's Local AR Agente de Calificación de Riesgo S.A., Moody's Local BR Agência de Classificação de Risco LTDA, Moody's Local MX S.A. de C.V, I.C.V., Moody's Local PE Clasificadora de Riesgo S.A., and Moody's Local PA Calificadora de Riesgo S.A. (collectively, the "Moody's Non-NRSRO CRAs") are all indirectly wholly-owned credit rating agency subsidiaries of MCO. None of the Moody's Non-NRSRO CRAs is a Nationally Recognized Statistical Rating Organization.

Additional terms for Australia only: Any publication into Australia of this document is pursuant to the Australian Financial Services License of MOODY'S affiliate, Moody's Investors Service Pty Limited ABN 61 003 399 657AFSL 336969 and/or Moody's Analytics Australia Pty Ltd ABN 94 105 136 972 AFSL 383569 (as applicable). This document is intended to be provided only to "wholesale clients" within the meaning of section 761G of the Corporations Act 2001. By continuing to access this document from within Australia, you represent to MOODY'S that you are, or are accessing the document as a representative of, a "wholesale client" and that neither you nor the entity you represent will directly or indirectly disseminate this document or its contents to "retail clients" within the meaning of section 761G of the Corporations Act 2001. MOODY'S credit rating is an opinion as to the creditworthiness of a debt obligation of the issuer, not on the equity securities of the issuer or any form of security that is available to retail investors.

Additional terms for India only: Moody's credit ratings, Assessments, other opinions and Materials are not intended to be and shall not be relied upon or used by any users located in India in relation to securities listed or proposed to be listed on Indian stock exchanges.

Additional terms with respect to Second Party Opinions (as defined in Moody's Investors Service Rating Symbols and Definitions): Please note that a Second Party Opinion ("SPO") is not a "credit rating". The issuance of SPOs is not a regulated activity in many jurisdictions, including Singapore. JAPAN: In Japan, development and provision of SPOs fall under the category of "Ancillary Businesses", not "Credit Rating Business", and are not subject to the regulations applicable to "Credit Rating Business" under the Financial Instruments and Exchange Act of Japan and its relevant regulation. PRC: Any SPO: (1) does not constitute a PRC Green Bond Assessment as defined under any relevant PRC laws or regulations; (2) cannot be included in any registration statement, offering circular, prospectus or any other documents submitted to the PRC regulatory authorities or otherwise used to satisfy any PRC regulatory disclosure requirement; and (3) cannot be used within the PRC for any regulatory purpose or for any other purpose which is not permitted under relevant PRC laws or regulations. For the purposes of this disclaimer, "PRC" refers to the mainland of the People's Republic of China, excluding Hong Kong, Macau and Taiwan.