



2026 LIFE INSURANCE AND ANNUITY CONFERENCE

The Power of Promise

Insights from Recent and Upcoming SOA Experience Studies



LIMA LOMA

Society of
Actuaries

ACLI



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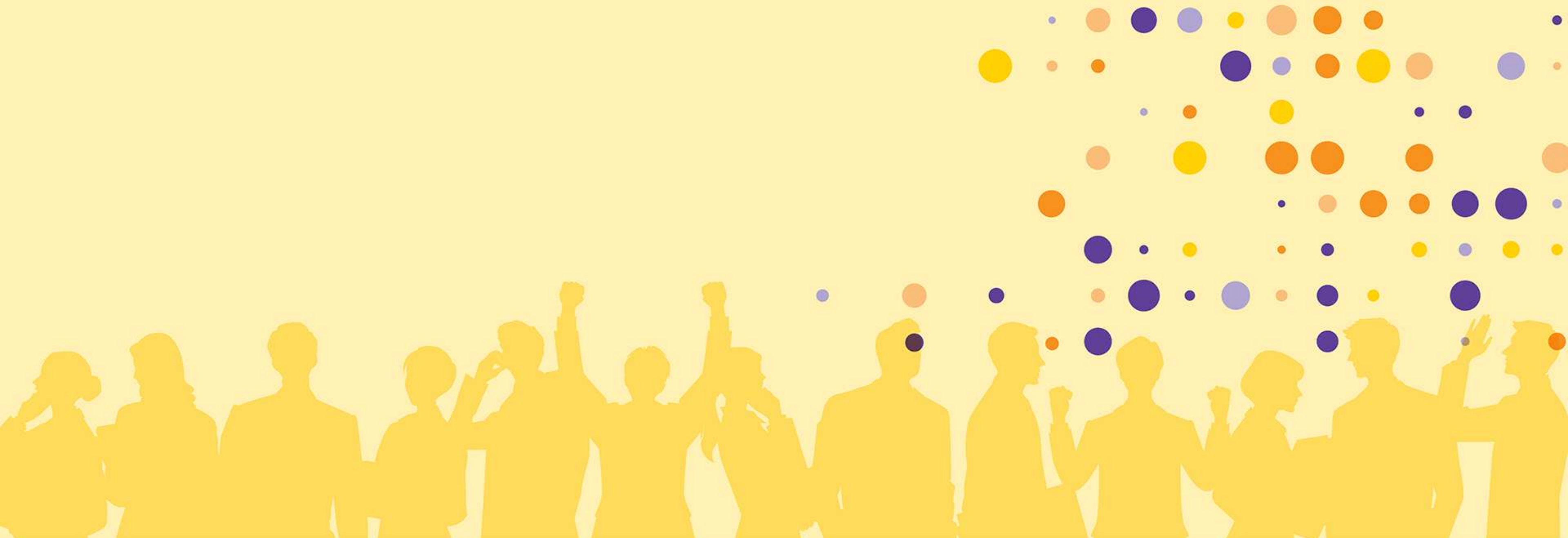
Senior Actuary, Experience Studies
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Principal
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Experience Studies Pro

A Brief History of Experience Studies Pro



SOA and LIMRA partnered to produce industry experience studies in 2022



Pursued studies that could be funded by industry purchase of output; determined by feasibility surveys

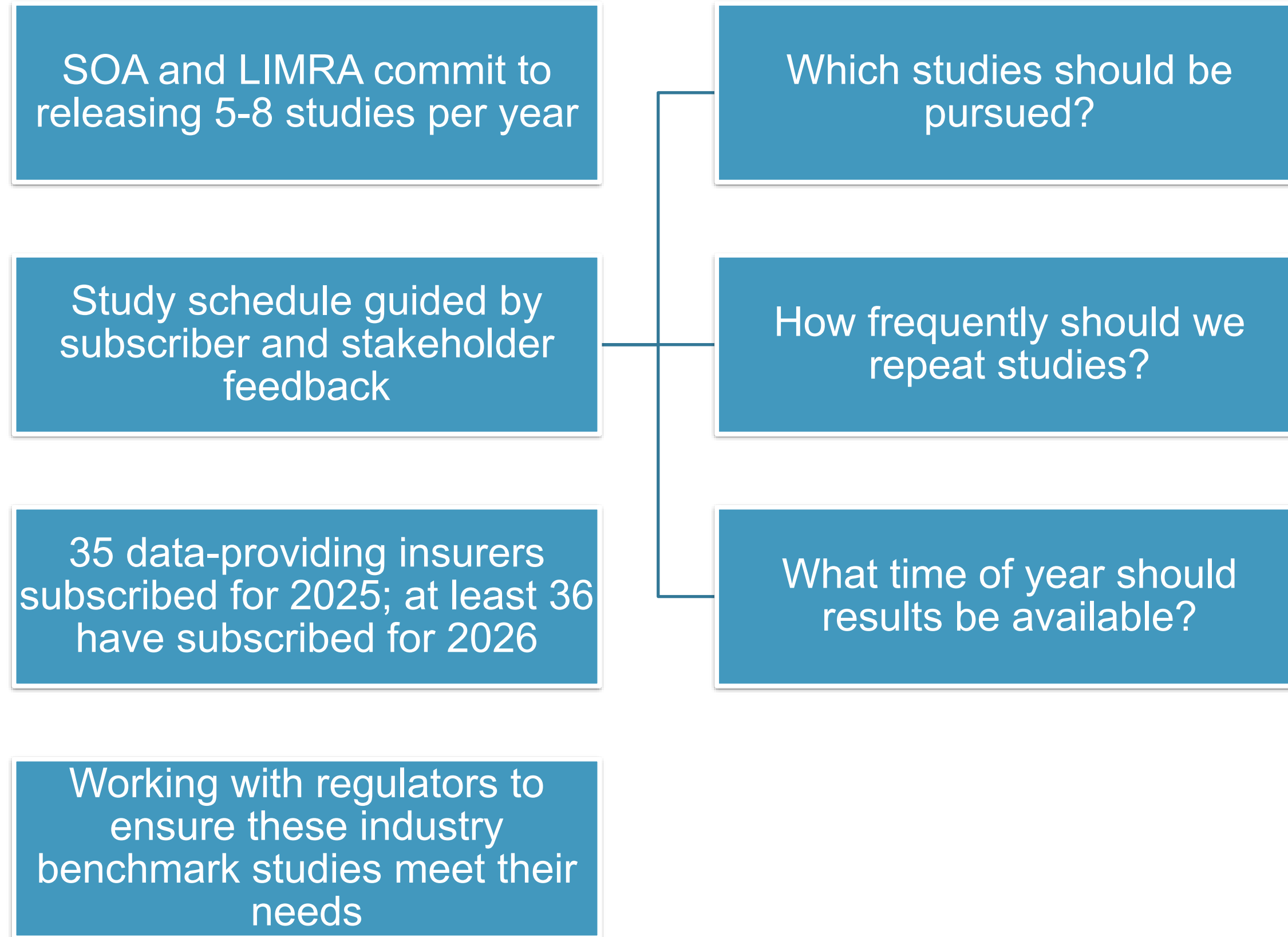


In 2024, chief actuaries recommended moving to a subscription model. Advantages:

- Reduced administrative work
- Increased study volume
- Long-term planning to study all needed product contingencies



Subscription Model Overview



2025 Experience Studies Pro Releases

2023-2024 Fixed Indexed Annuity Policyholder Behavior Study

2015-2022 Group Long-Term Disability Incidence Study

2022-2024 Variable Annuity Policyholder Behavior Study

2023-2024 Fixed Rate Deferred Annuity Policyholder Behavior Study

2009-2023 Term Conversion Incidence and Post-Conversion Mortality & Lapse Study



Results Sampler: 2009-2023 Term Conversion Study

- Covers conversion, mortality, and lapse for term and converted policies for years 2009-2023
- 17 contributors
- 63.6 million policy years exposed on term, 6.2 million policy years exposed on converted
- Prior study covered 2000 - 2014
- Includes analysis by term length, conversion timing, conversion incentives, plus usual experience variables

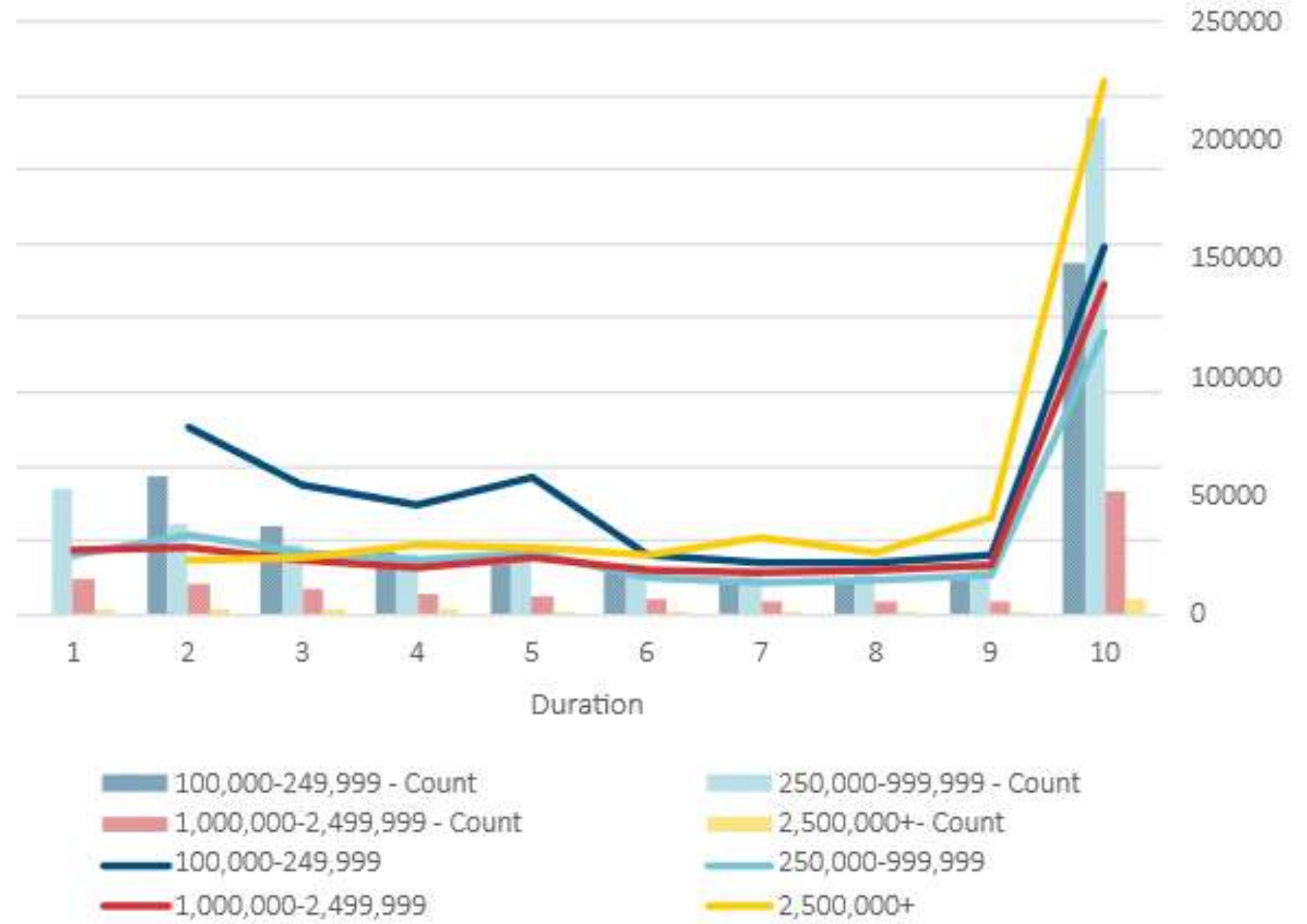
Results Sampler: 2009 – 2023 Term Conversion Study

Conversion Rates Based on Amount By Duration and Face Amount
10-Year Level Term

Lines = Conversion Rates

Bars = Count of conversions

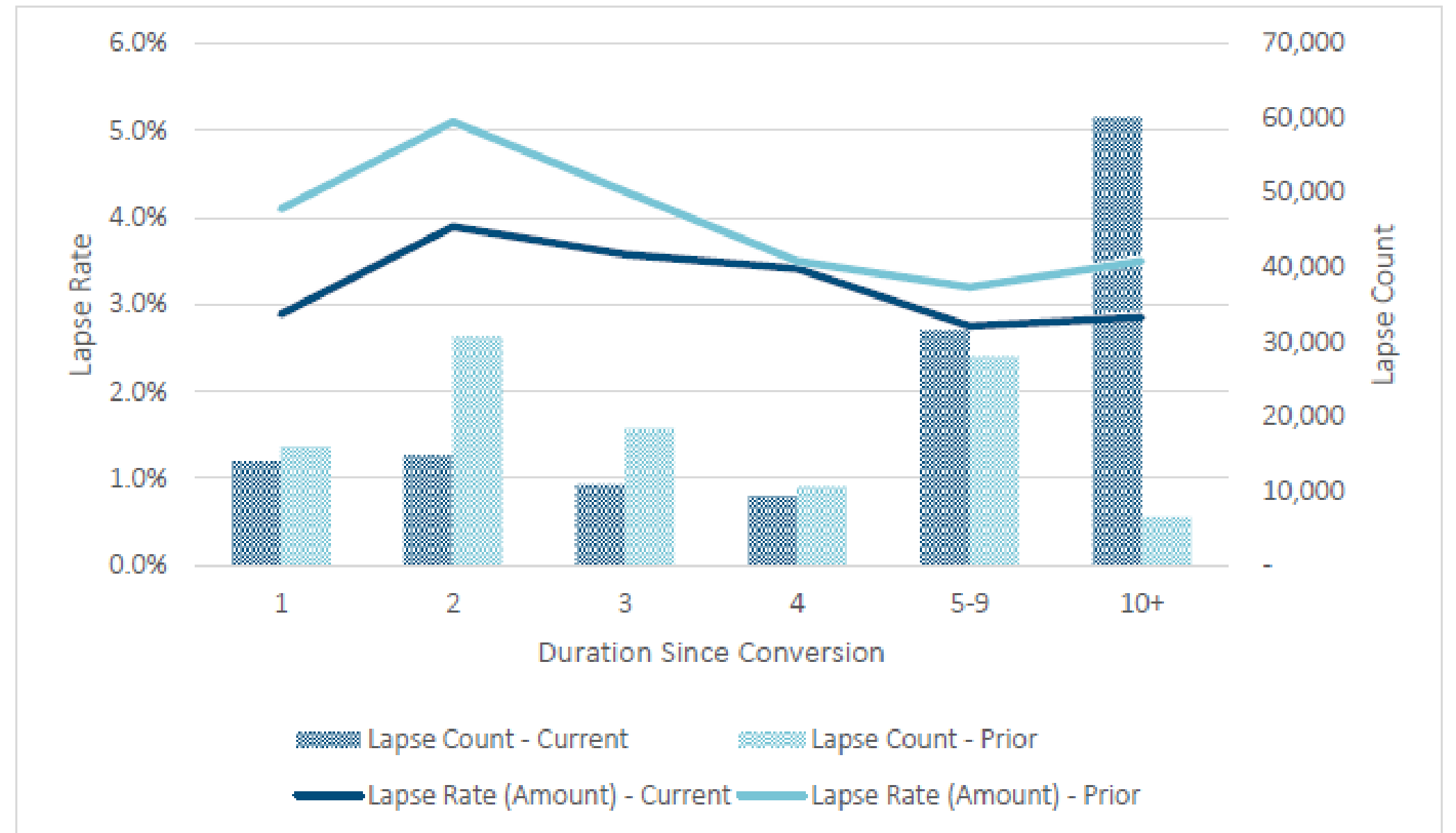
- Conversions rates are generally low
- For first five durations, term under \$250,000 shows significantly higher conversion activity
- For durations 6+, face amounts \$2.5 million and greater show higher conversion activity



Results Sampler: 2009 – 2023 Term Conversion Study

Post-Conversion Lapse Rates by Amount
Current vs. Prior Study

- Lapse rates by amount are notably lower in current study relative to prior study
- Most notable in years directly following conversion
- Converted policies exhibit flatter lapse rate slope than new issue policies



Results Sampler: 2009 – 2023 Term Conversion Study

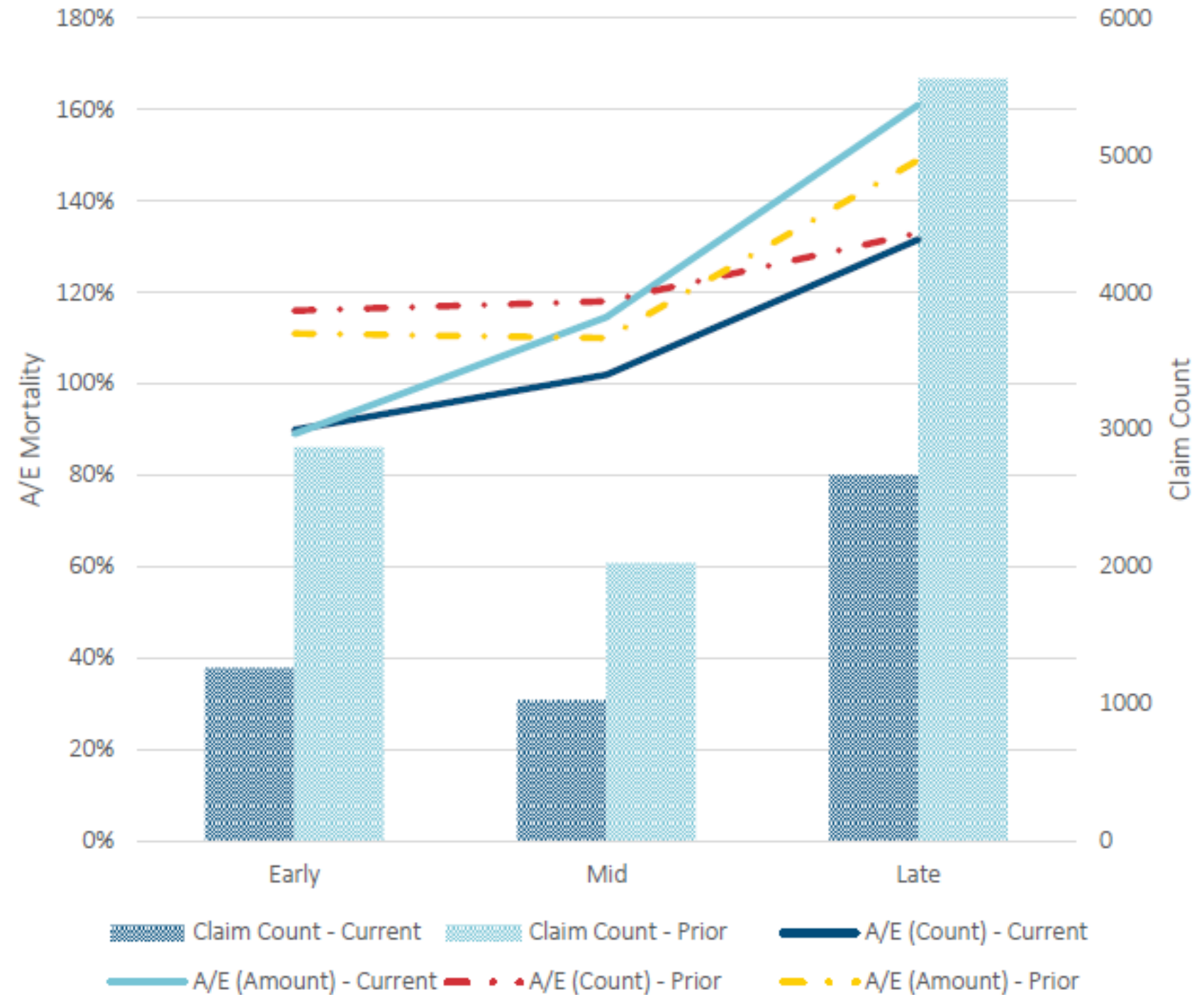
**** Expected table is different ****

Prior study → 2008 VBT

Current study → 2015 VBT

- Direct comparisons between study results are not advised
- Expected mortality based on **original term policy** issue age and duration
- “Late” converters exhibit notably higher mortality than “Early” converters
- Differential seems to have grown

A/E Post-Conversion Mortality: Current vs. Prior Study
By Duration at Conversion Group



Results Sampler: 2009 – 2023 Term Conversion Study

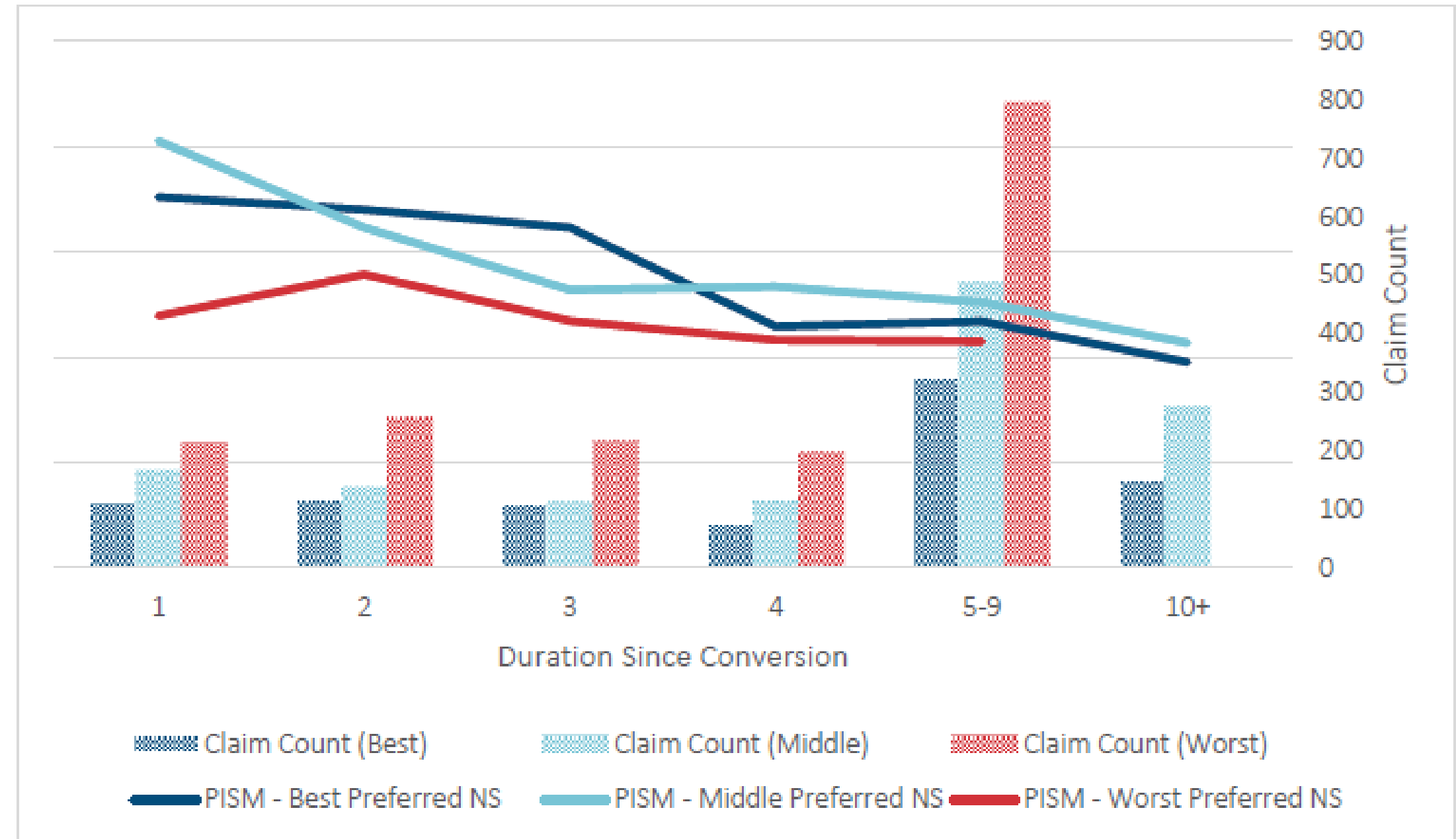
Amount-Based Point-In-Scale Mortality
By Duration Since Conversion and Risk Class

Point-in-scale mortality (PISM):

Converted mortality relative to a pre-conversion cohort with similar duration since underwriting

→ Ratio of A/E ratios

- PISM ratios indicate stronger anti-selection for better preferred classes
- Difference diminishes over time



* Confidentiality rules have caused data to be omitted

Results Sampler: 2022 – 2024 Variable Annuity Behavioral Study

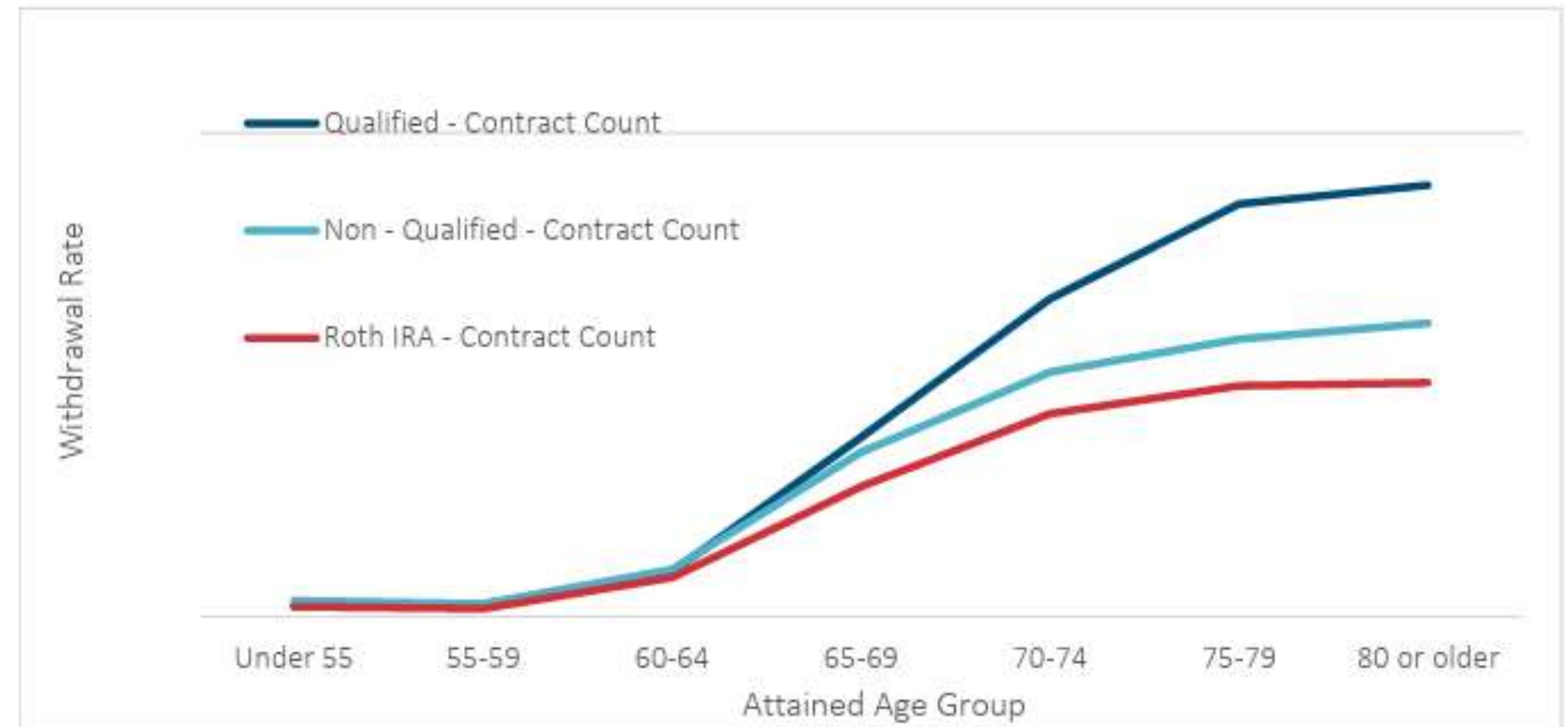
- Covers VA policy holder behavior for years 2022-2024
- Includes withdrawals, premium deposits, and surrenders
- Update to 2019 – 2021 study
- 17 contributors
- 11.5 million life-years, \$1.5 trillion surrender amount exposed
- Includes analysis by presence of GLWB rider, in-the-moneyness of riders, utilization, surrender charge period, tax status, plus usual experience variables



Results Sampler: 2022 – 2024 Variable Annuity Behavioral Study

Withdrawal Rates (Count) by Age and Market Type
With GLWB Rider

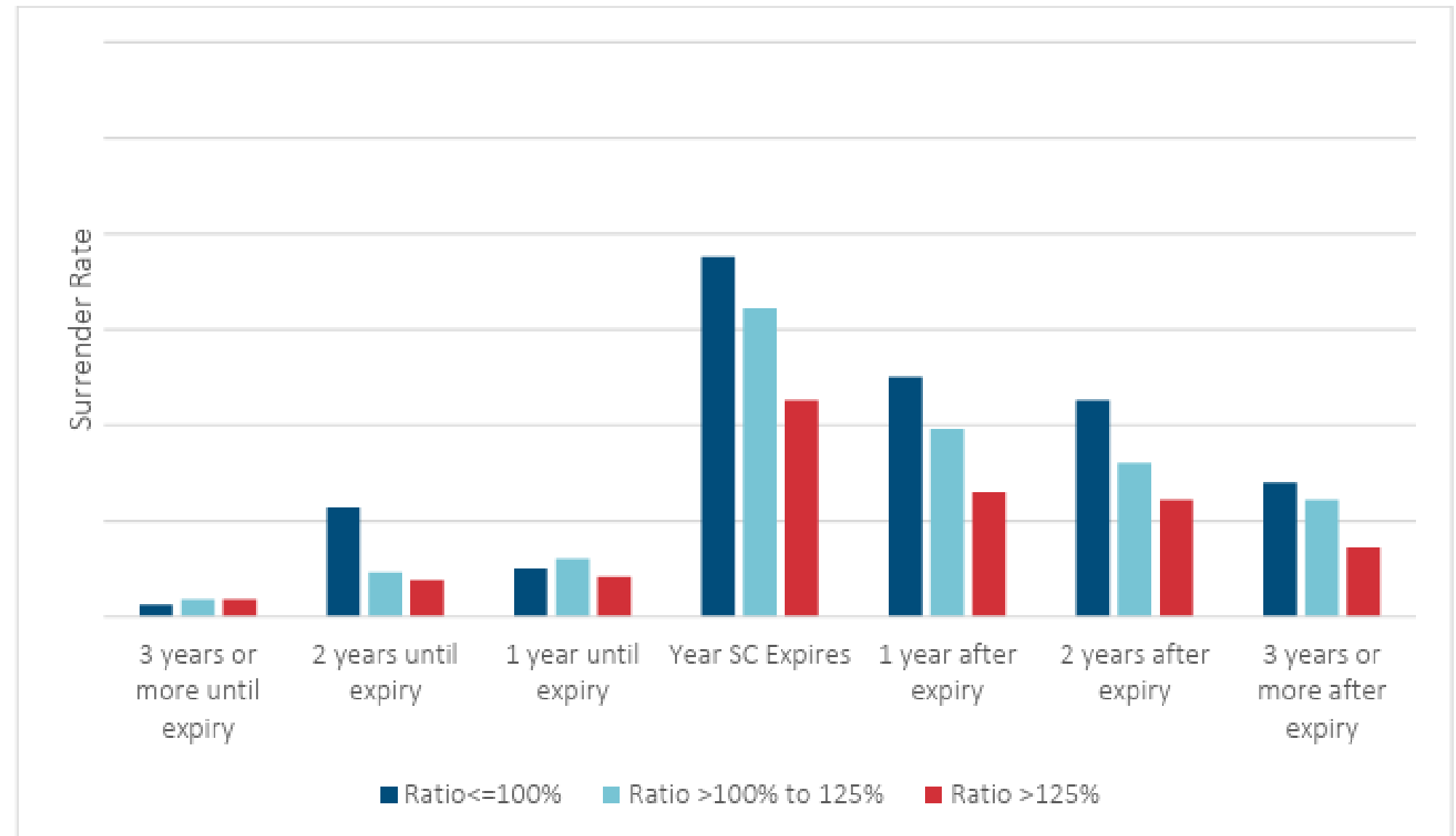
- Percentage of contracts taking withdrawals increases with age, approaching 90% by count on qualified contracts
- Taxability affects withdrawals, with Roth IRA VAs having much lower withdrawal rates



Results Sampler: 2022 – 2024 Variable Annuity Behavioral Study

- In-the-moneyness (ITM) of GLB rider affects surrender behavior
- **Nominal ITM = GLB Benefit Base / Total Contract Value**
- Highest ITM ratios have lowest surrender rates
- Spike in year surrender charge expires regardless of ITM ratio

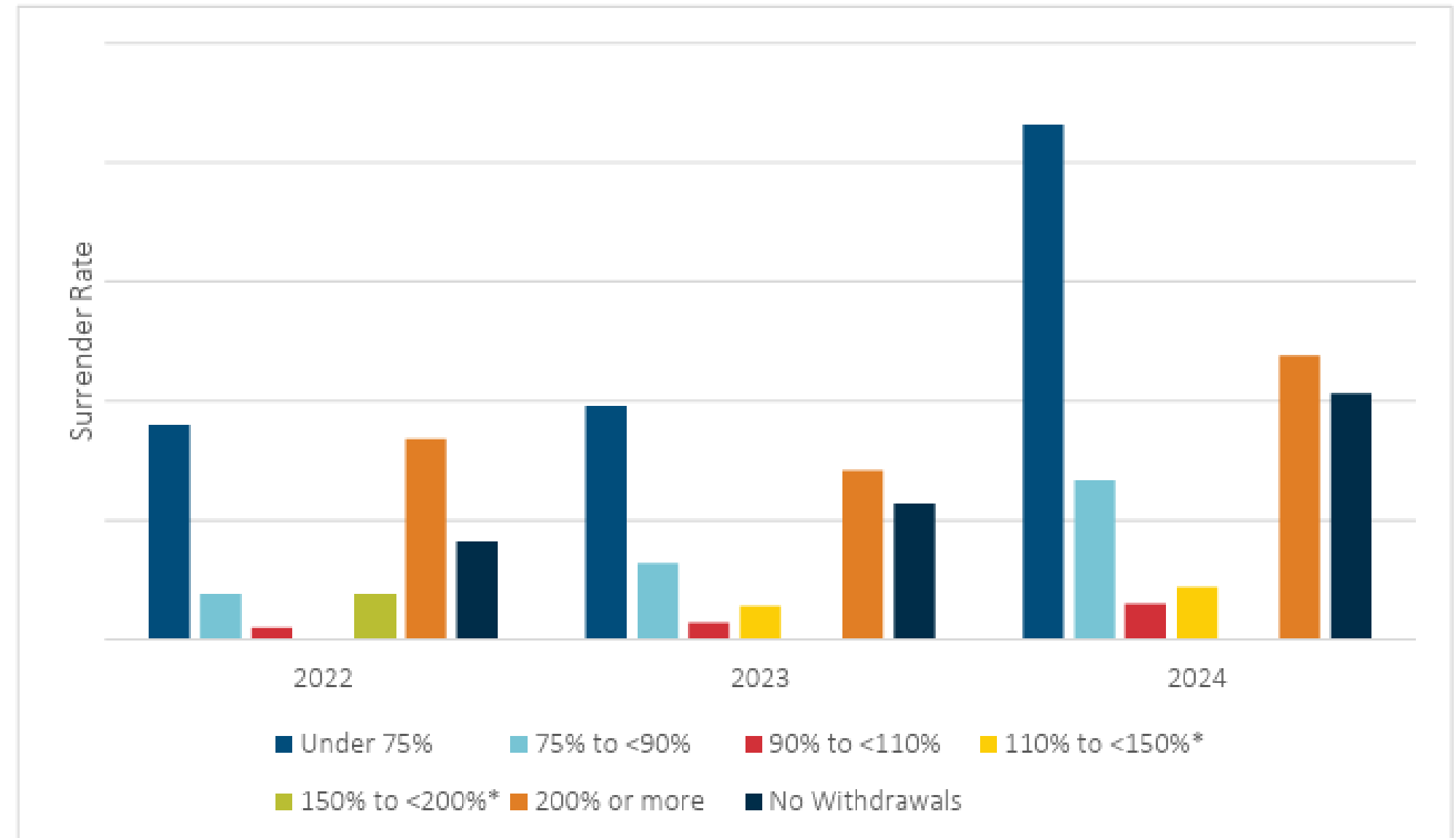
Surrender Rates by Nominal In-The-Moneyness Ratio of GLWB and Surrender Charge Horizon in 2023



Results Sampler: 2022 – 2024 Variable Annuity Behavioral Study

- Surrender rates vary by benefit utilization
- **Utilization = withdrawals / maximum withdrawal amount**
- “Efficient utilizers” have ratio close to 100%
- Efficient utilizers have lowest surrender rates (0.5-1.5%), with surrender rates increasing the further from “efficient” they are

Surrender Rates by Utilization and Observation Year
With GLWB Rider



* Confidentiality rules have caused data to be omitted

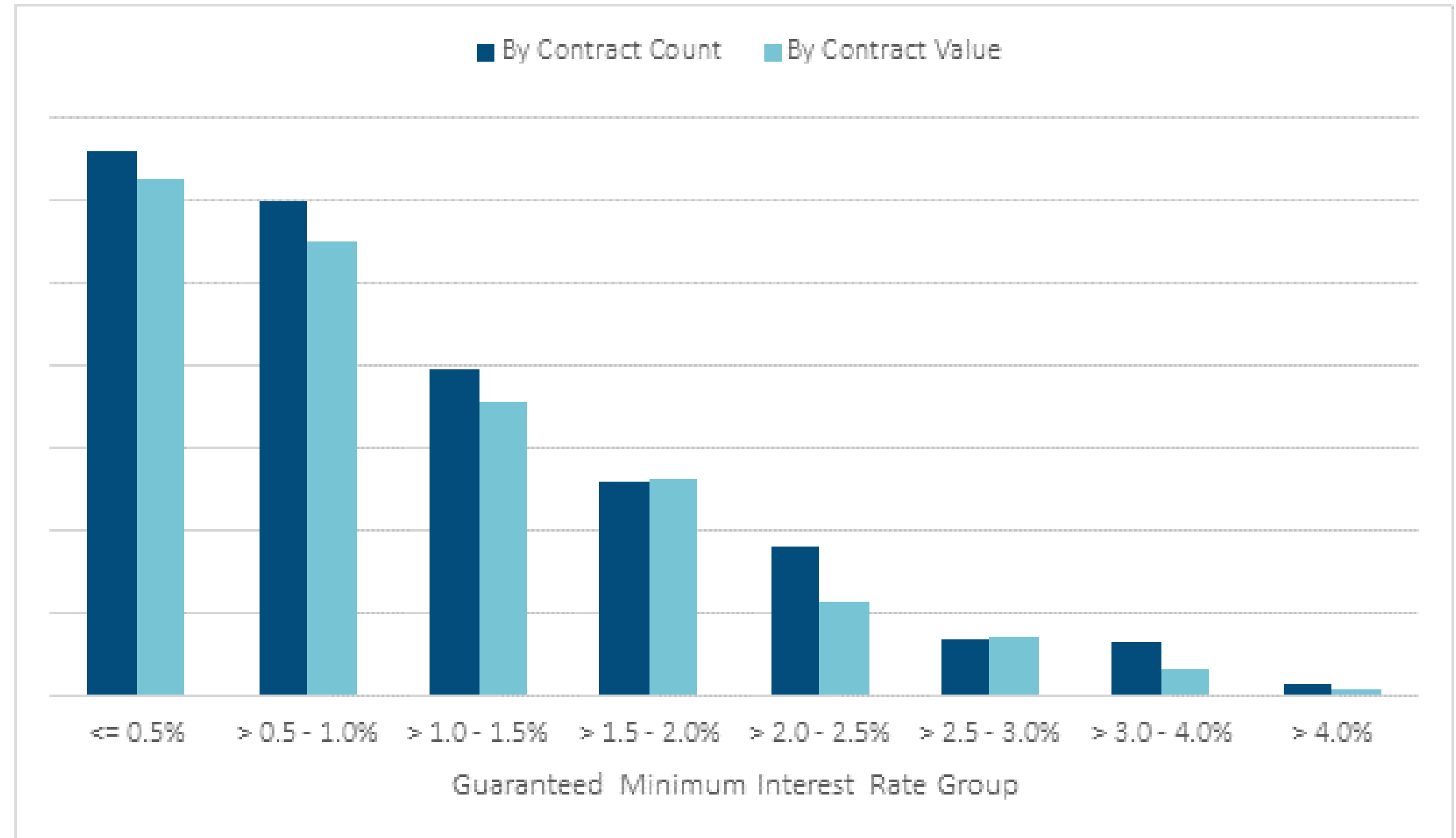
Results Sampler: 2023-2024 Fixed-Rate Deferred Surrender

- Twenty-four contributors, covering 65% industry new premium
- Calendar years 2023-2024
- Update to 2015 – 2022 study
- Over 567,000 surrenders on 4.8 million exposure
- Very limited GLB exposure
- Includes analysis by years to surrender charge expiry, crediting rate, relationship between crediting rate and market rate, plus usual experience variables

Results Sampler: 2023-2024 Fixed-Rate Deferred Surrender

- Surrender rates by both contract count and contract value decrease with increasing guaranteed minimum interest rate
- Most evident after surrender charge period ended

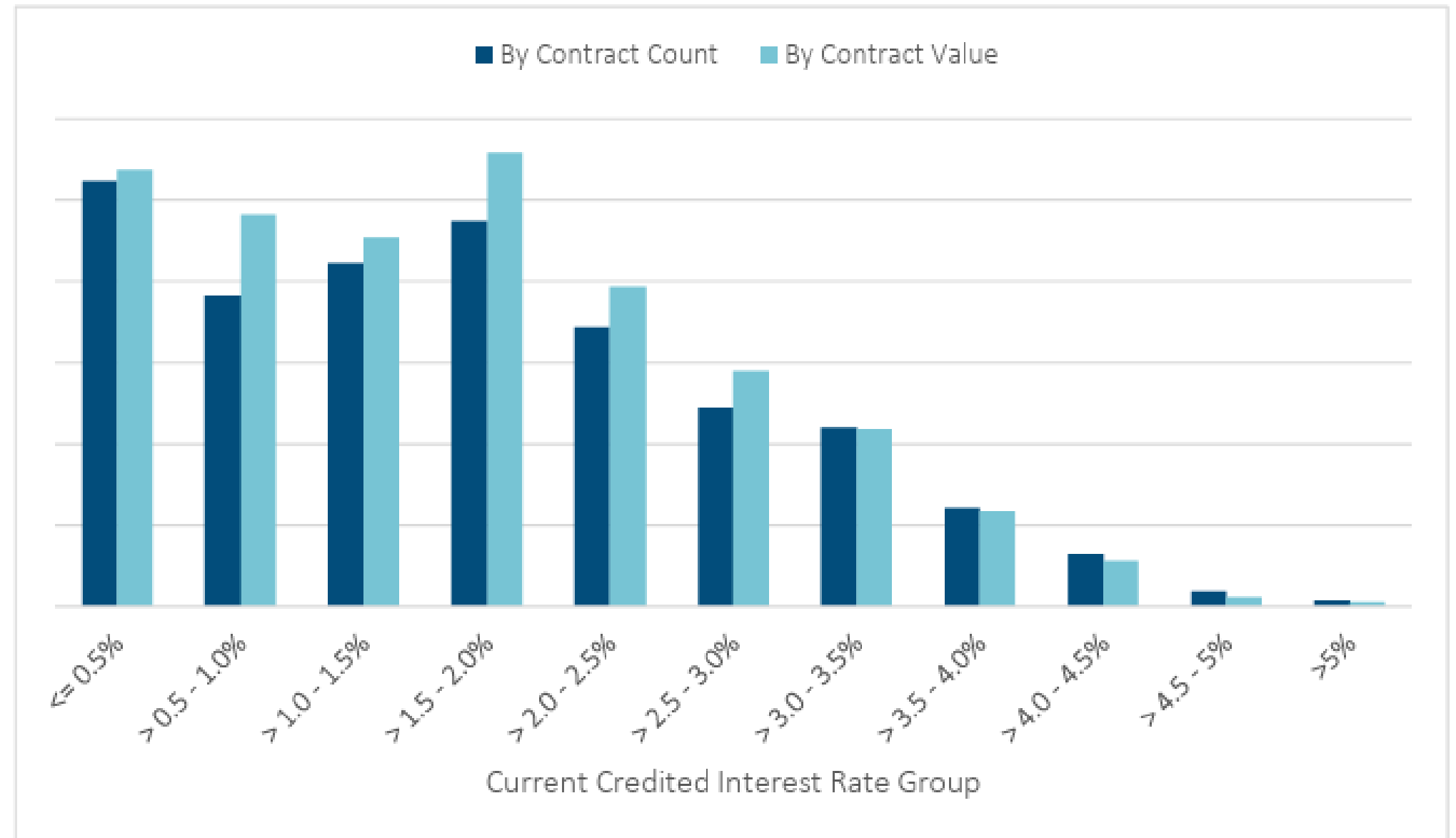
Surrender Rates by Contract Count and Amount
By Guaranteed Minimum Interest Rate, After Surrender Charge Period



Results Sampler: 2023-2024 Fixed-Rate Deferred Surrender

Surrender Rates by Contract Count and Amount
By Current Credited Interest Rate

- Surrender rates generally decrease as credited rate increases
- The increase at the “> 1.5 – 2%” grouping caused by distribution of business
- Note switch in count vs. amount experience at rates higher than 3%



Planned Life and Annuity Studies: 2026 and Beyond

2026 Releases

- 2018-2024 Individual Life Mortality
- 2009-2024 Post-Level Term Lapse & Mortality
- 2020-2024 Payout Annuity Mortality
- 2015-2024 Deferred Annuity Mortality
- 2024-2025 RILA Policyholder Behavior

2027 and Beyond

- Industry Expense Study
- Fixed Indexed Annuities Behavior
- Fixed-Rate Deferred Annuities Behavior
- Variable Annuity Behavior
- UL Lapse and Surrender
- UL Premium Persistency
- GI and SI Mortality and Lapse
- Structured Settlements Mortality



Individual Life Experience Committee: Recent Insights



Individual Life Experience Committee (ILEC)

Oldest SOA Committee (1949)

Charter (2024):

“This committee is responsible for the ongoing reporting of mortality, policyholder behavior, and other experience under individual life insurance contracts issued by life insurance companies, and monitoring of developments that could impact data collection and experience reporting in the future.”

Volunteers from direct writers, reinsurers, consultancies:

- "Public domain mortality brain trust"
- Speed dial list for POG members for SOA topics and industry pulse

ILEC: 2026 Goals

Mortality study though 2023

- Traditional benchmark against valuation table
- Model-grounded results: signal vs noise
- More depth: high-level underwriting characteristics
- Company group differences

Lapse and surrender study

- First in my time on ILEC (11 years)

Ongoing: support for data collection and attribute information

- Data source: Valuation Manual submissions

TOPICS TODAY ->

High-level vs yardstick

Models

Systemic risks

- Annual risks
- Company mix

Year on year improvements

2020-2021 Major Conclusions

The shape of the hit evolved: determined by product, age differences

2020: Mortality up across the board

2021: Delta wave, changed mortality dynamics

Some regions opening up

Mortality down for older ages

Mortality up for middle ages.

Impact: term business, results by amount

2023: back to 2018-9 level range

Whether recovered or not might depend on your view of mortality improvements.

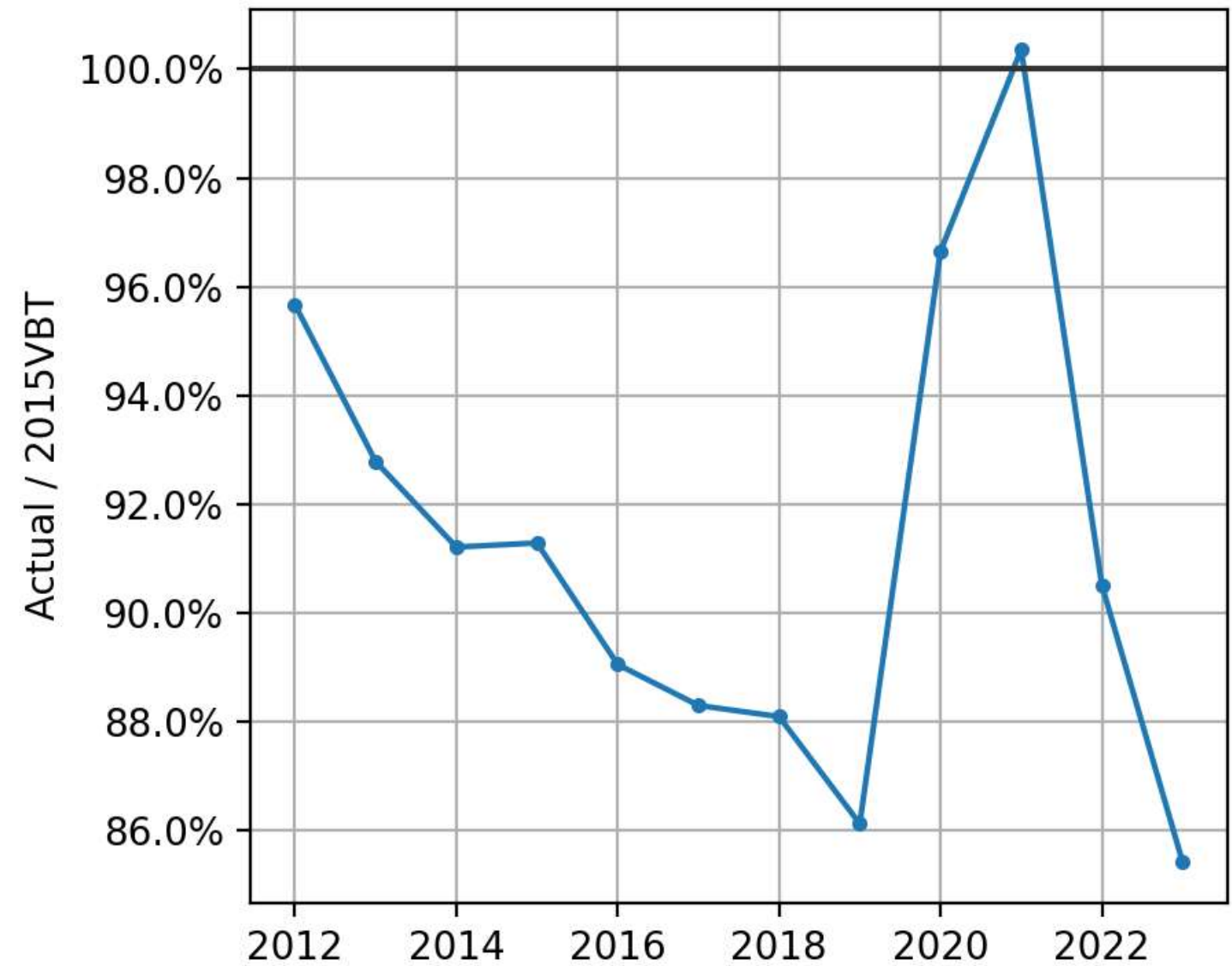
“Acceleration of deaths” theory validation or refutation: also interrelated

Much other SOA research on COVID era

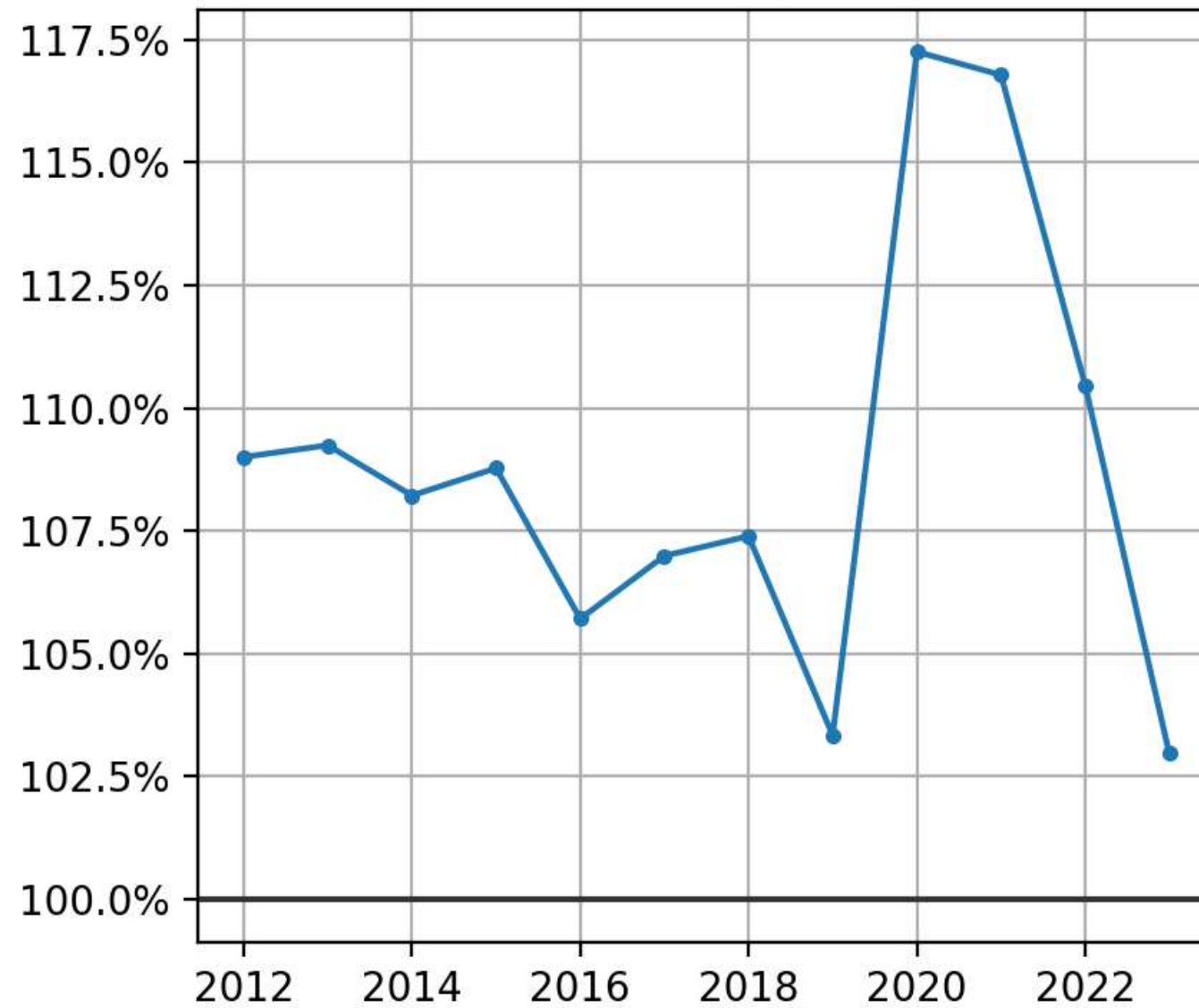
- <https://www.soa.org/resources/research-reports/2020/impact-coronavirus/>

Core set in total: 2012-2023

Core set by amount



Core set by policy



Downward trend vs table does not mean mortality fell: it means table was steeper than mortality.

2021 was over 2020 by amount:

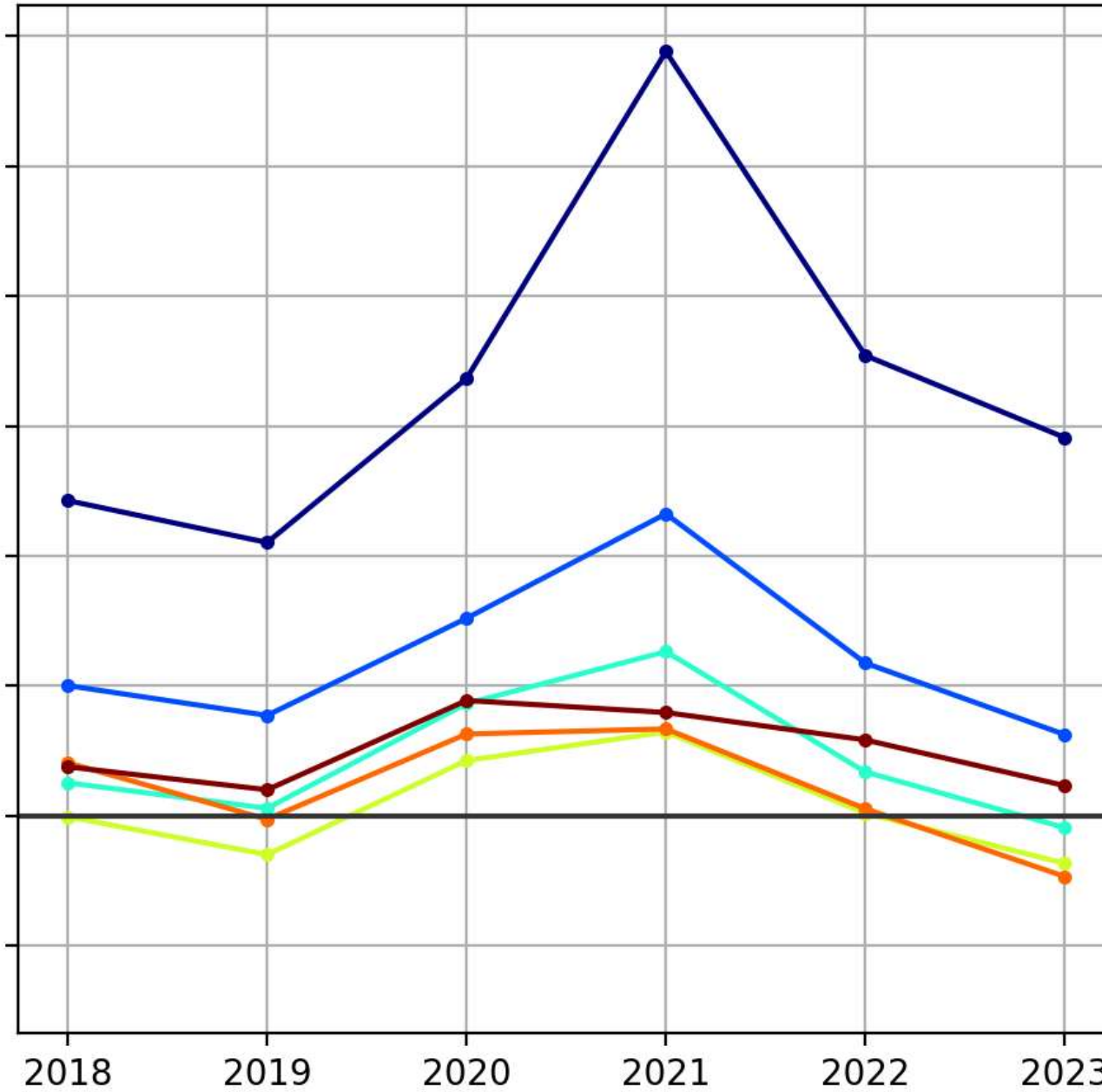
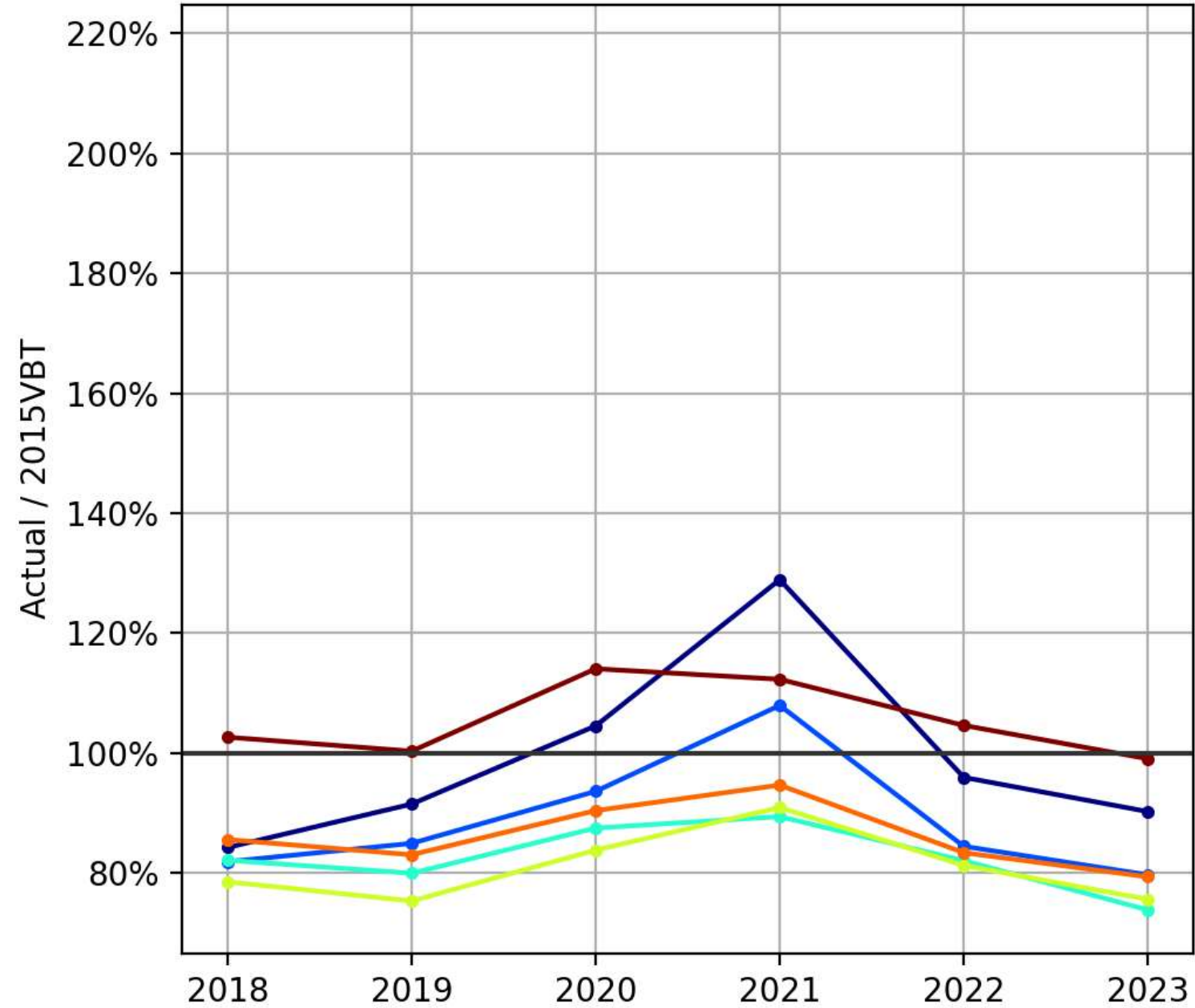
- Middle ages with higher amounts (Term) impacted
- Full year of covid

2023 by amount was under 2019, but above the extrapolation.

Core set: policy duration

Core set by amount

Core set by policy



- 01-02
- 03-05
- 06-10
- 11-15
- 16-20
- 21+

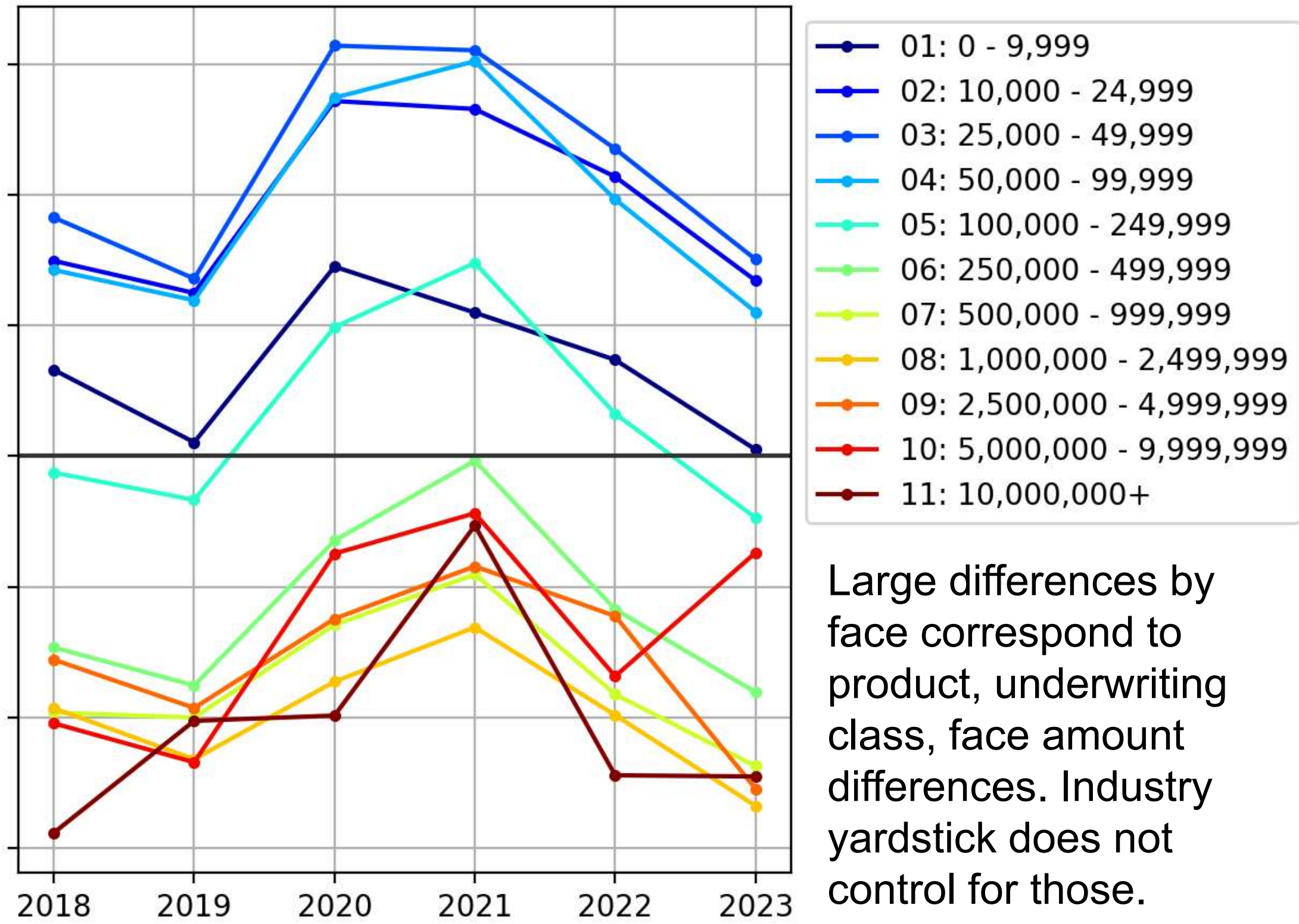
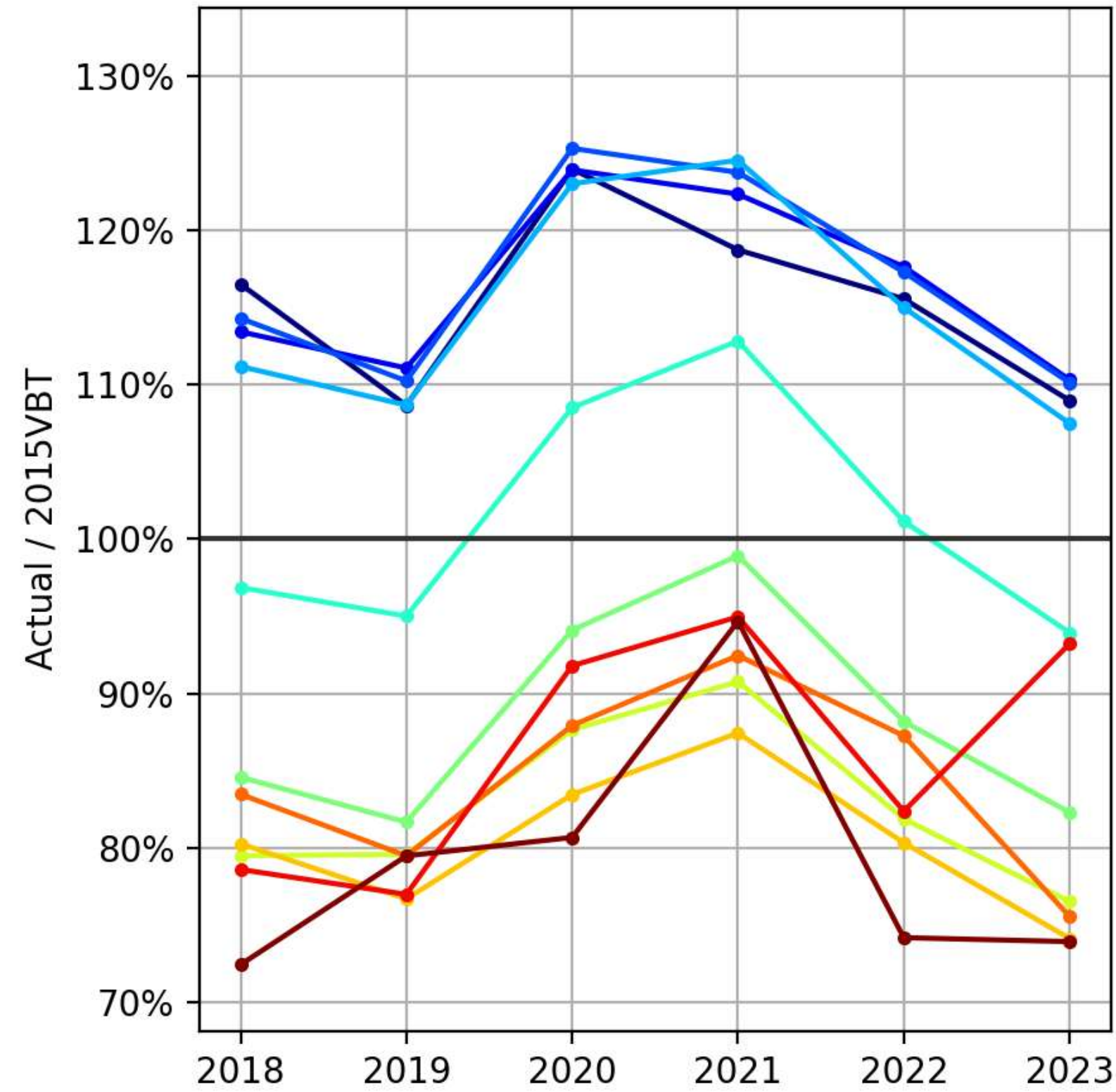
Early duration spike despite underwriting tightening

By 2022-3 durations 3+ near or under 2018-9 levels

Core set: face band splits

Core set by amount

Core set by policy

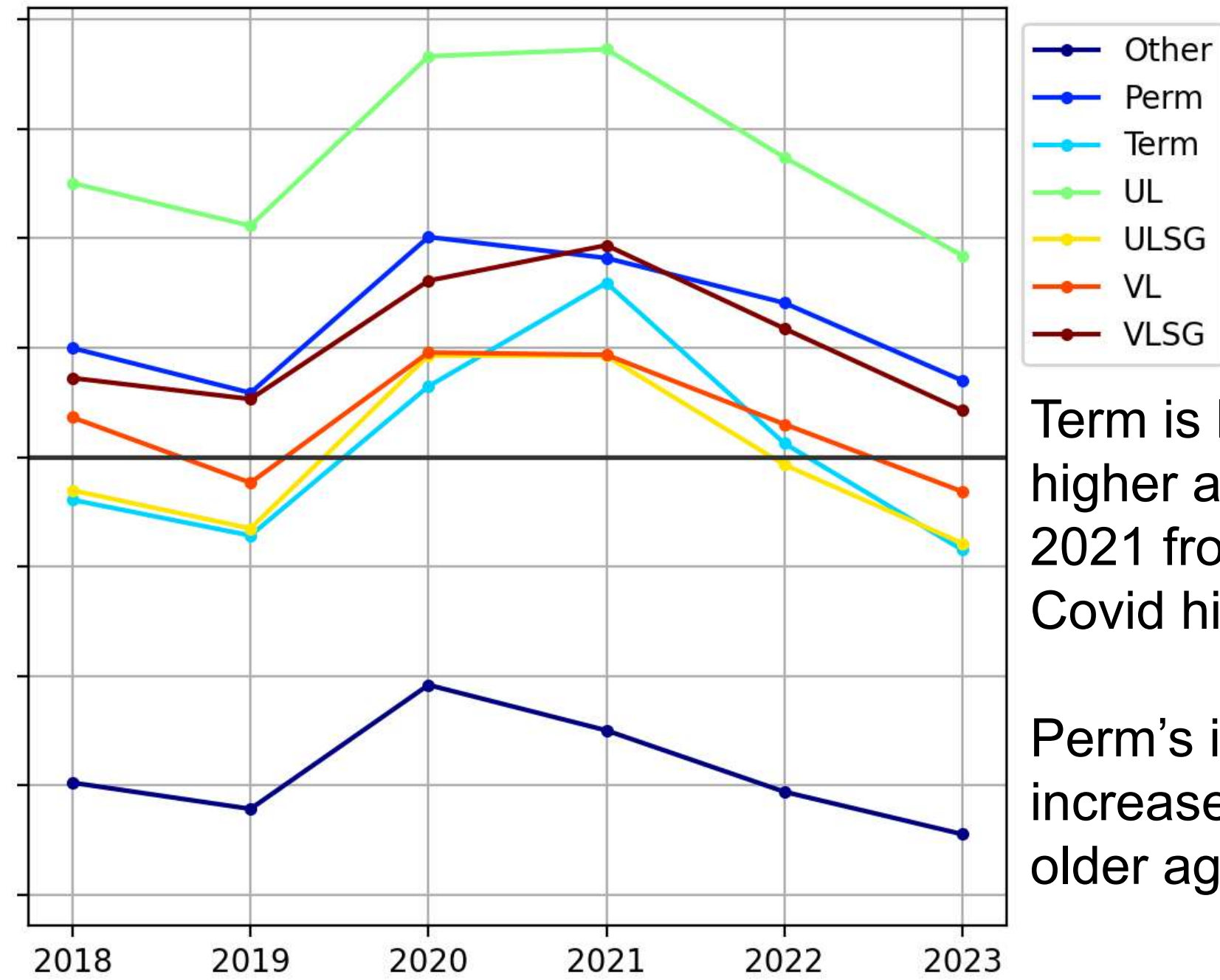
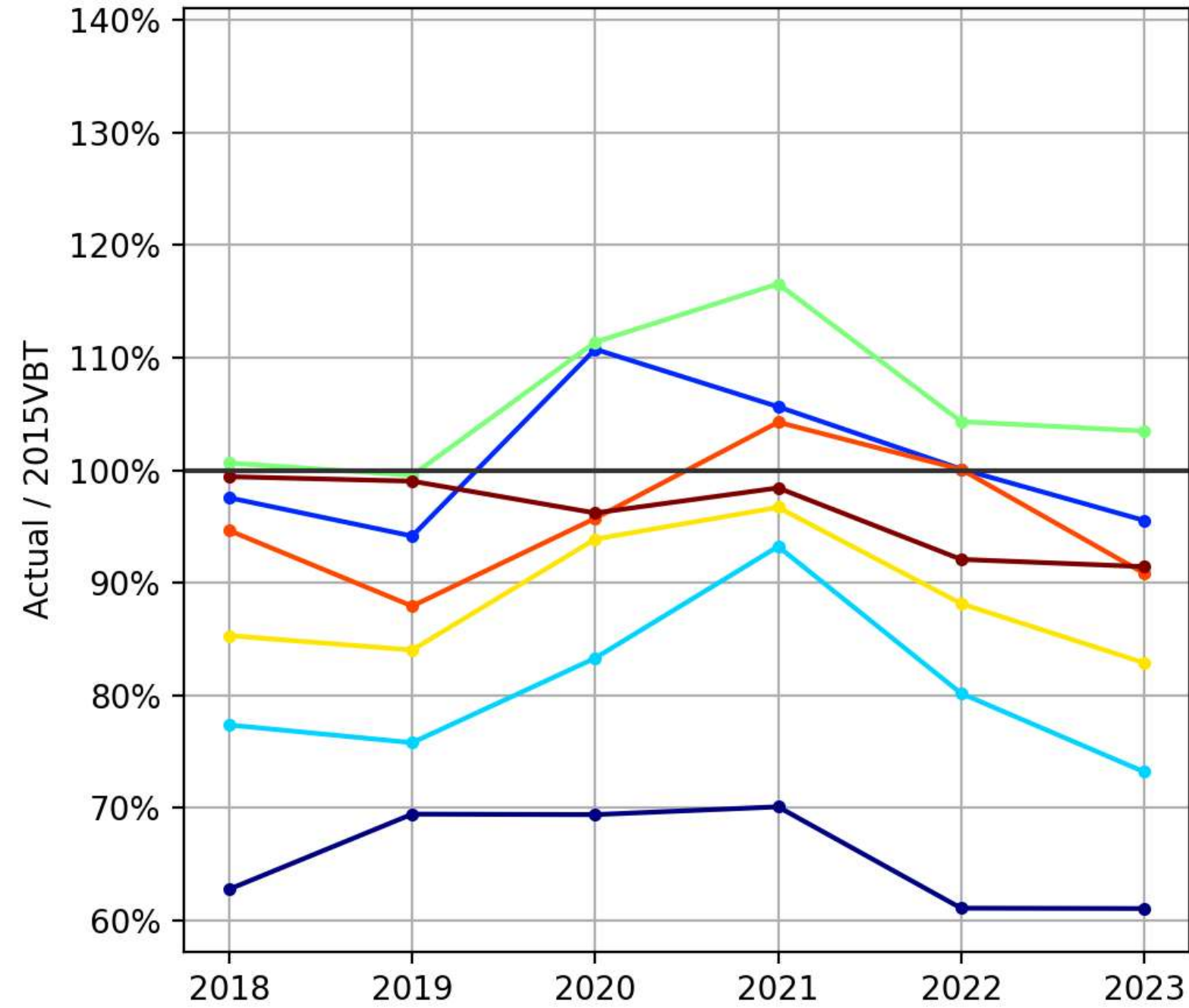


Large differences by face correspond to product, underwriting class, face amount differences. Industry yardstick does not control for those.

Core set: product splits

Core set by amount

Core set by policy



- Other
- Perm
- Term
- UL
- ULSG
- VL
- VLSG

Term is lower reflecting higher amounts; spike in 2021 from middle age Covid hit.

Perm's initial 2020 increase was due to older age of insureds.

Modeling Subcommittee

The problem: mix of business by splits distorts results

The approach: **integrate models into normal experience reporting**

model the business each year, report on year-to-year change

Goal: report **changes in signal, less noise**

Above and beyond actual / table – **address mix-of-business issue**

Table might or might not fit slopes by duration, year, attained age, certainly not underwriting class differences

Related issues to address are measuring the aggregated experience's...

Year to year changes

Rate convergence

Select period

Mortality improvement

Work in progress – this is an early draft view

Models: Why? Control for features. From the last report:

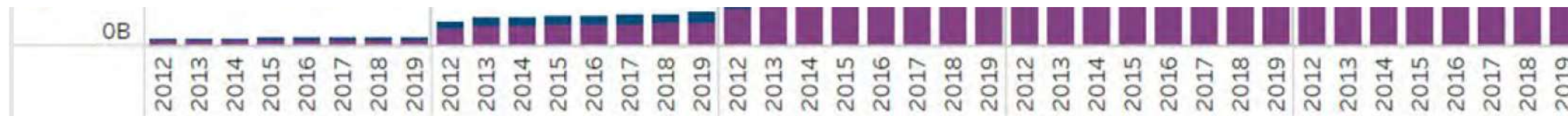
Figure 3.4

A/E BY GENDER AND ATTAINED AGE (CORE DATA)

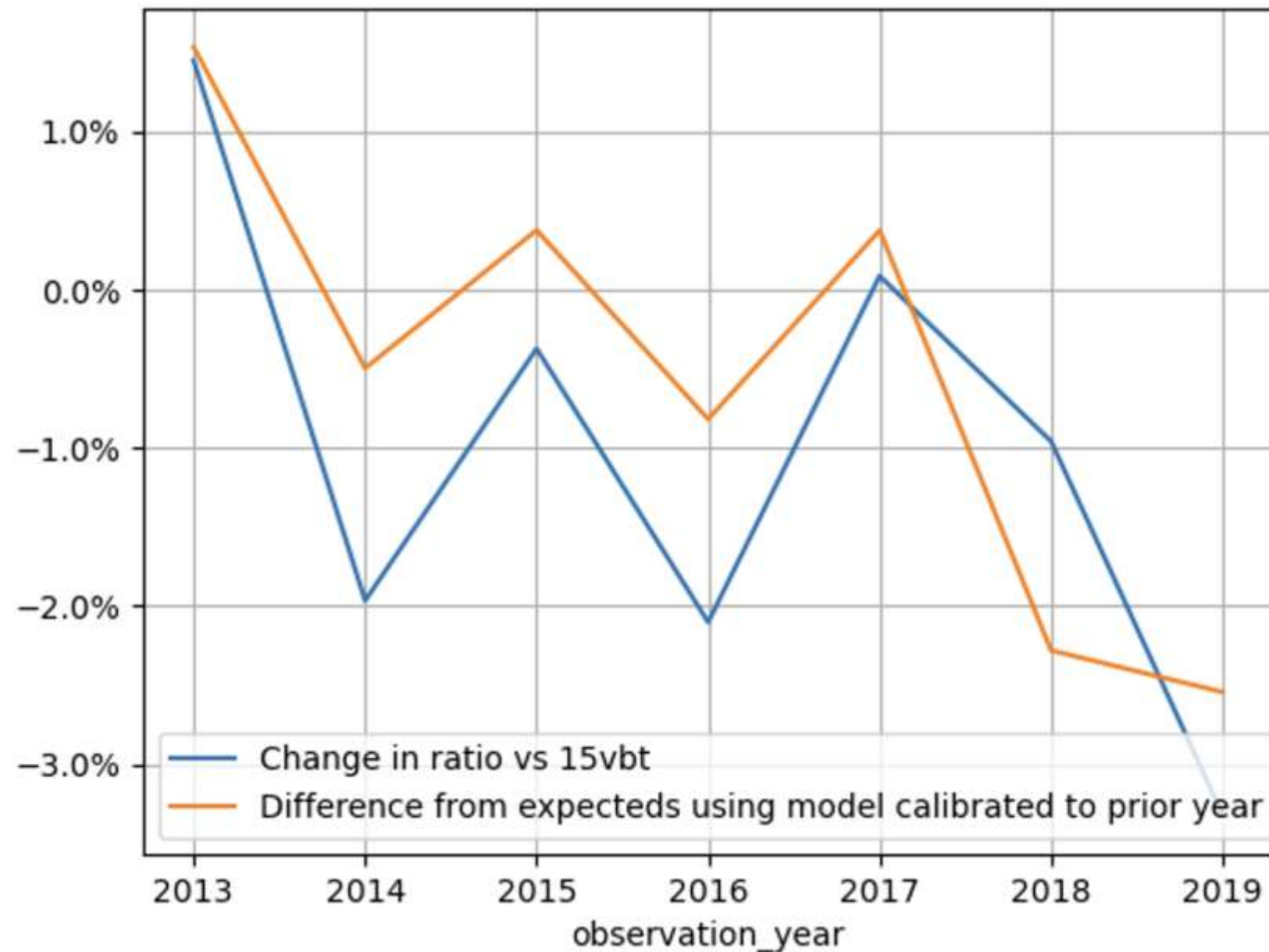
Did mortality worsen, or did high-mortality younger issues flow through?



- A/E patterns for traditional issue ages 40 – 69 show **relatively consistent patterns of improving mortality** over the observation period for both males and females.
- Attained ages 18 – 39 show **patterns of a high A/E for males** and increasing mortality for females. All of the observations are fully credible by count, except for females in observation period 2012, which had 873 claims.
- Older age mortality (70+) had a higher A/E than ages 40 – 69 with less improvement. We look more closely into older age mortality in Section 6.



Year to Year Changes: different impressions pre-Covid



Experience by policy: smoker distinct, no PLT
Use model to control for features: age, duration slope; uw class; sex;
some splits by face if data indicate.

Standard analysis: change in A/15VBT ratio

- **Drop about 0.5% - 2% each year**
- When controlling for band and underwriting class, drop is less

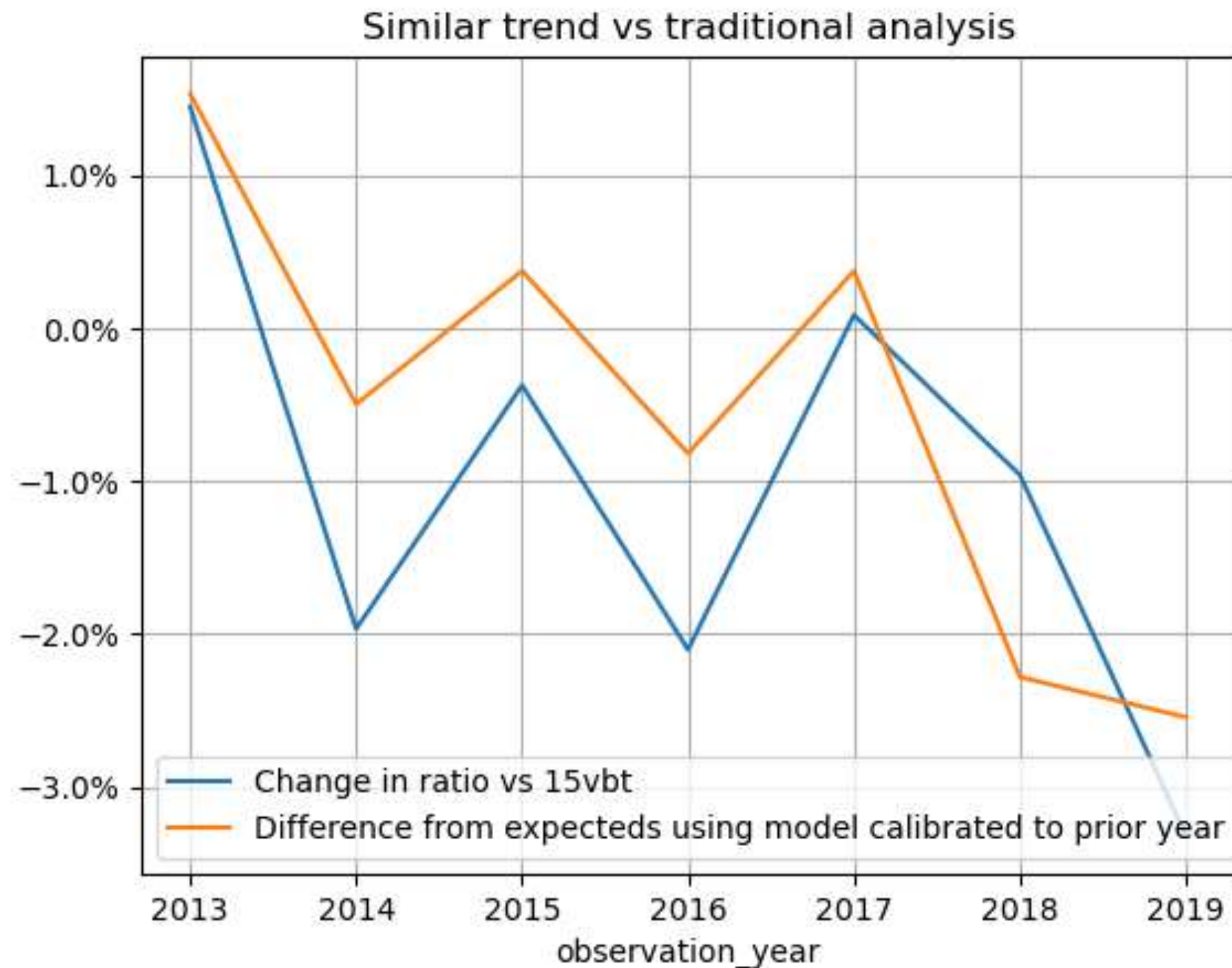
Model-based analysis: change up or down vs prior year: what mortality improvement aims to tell

- **Drop less most years:** Trending down *slightly*: model has less slope difference vs experience than 15vbt by age, duration

Exception: 2018: other factors

- Different company mix: more companies
- Change in data provider

Mortality improvement: year on year (pre-Covid)



ILEC core data set (no PLT;

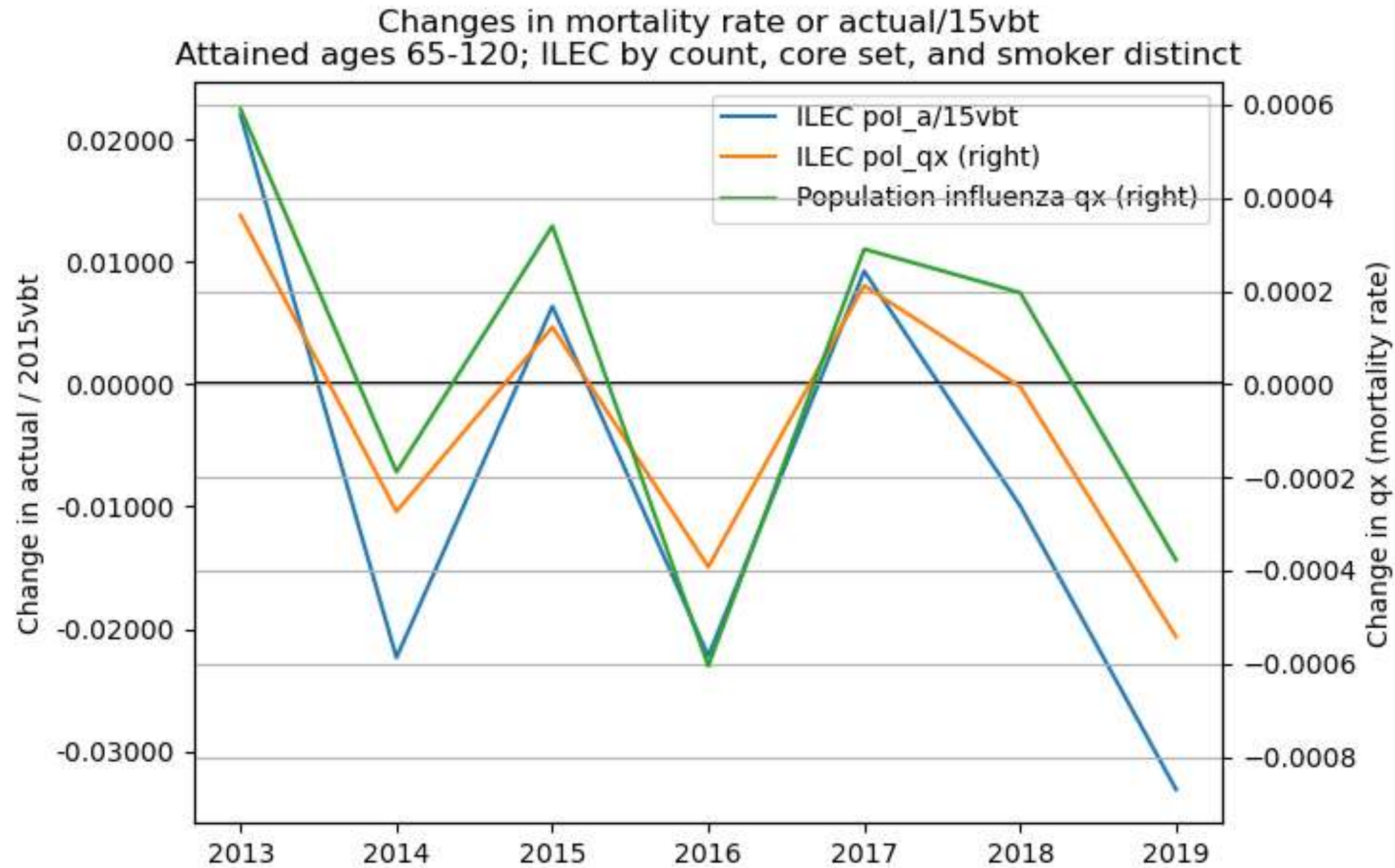
Variables including: age, sex, duration, uwclass; some splits by face amount band if data indicates

- Compare results to the prior year model:
 A/E (prior year model)-1
- Trending down likely due to improvement
- Volatility: likely driven by older ages

Standard analysis: change in A/15VBT ratio

- Drop about 0.5% - 2.0% each year
- When controlling for band and underwriting class, drop is less
- Exception: 2018: other factors
 - Different company mix
 - Change in data provider, field definitions possibly impact

Pre-covid: Systemic risk

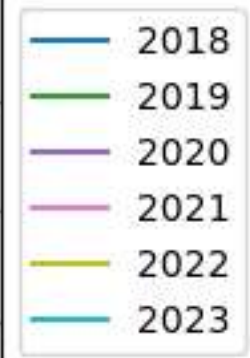
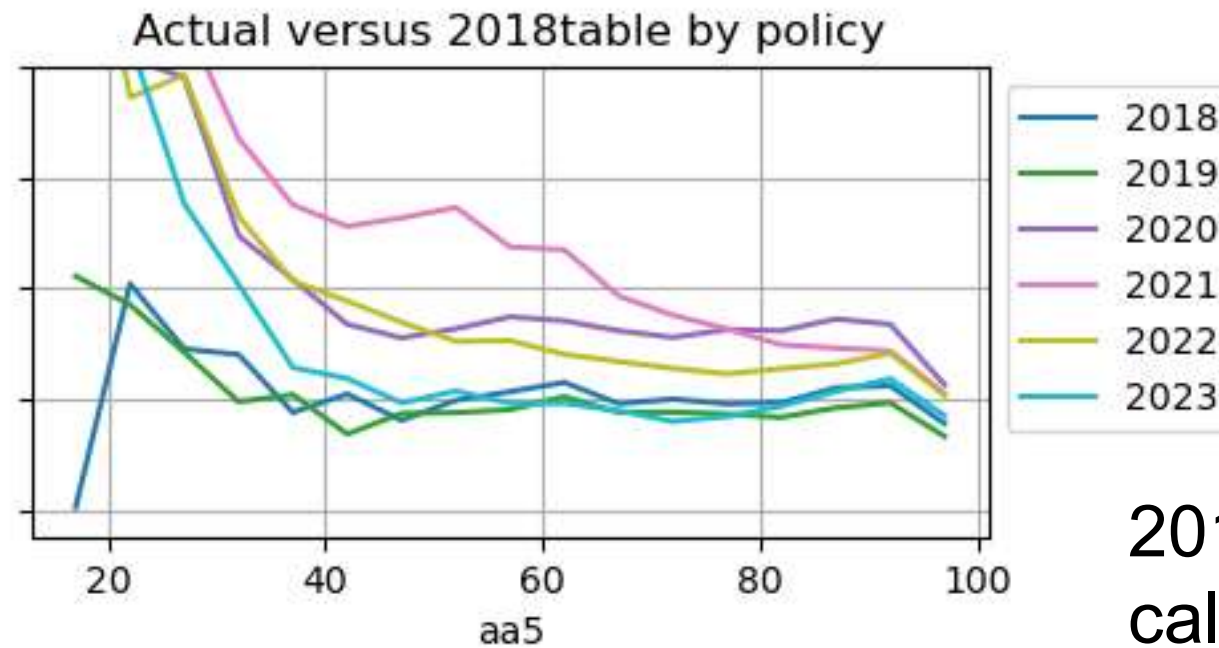
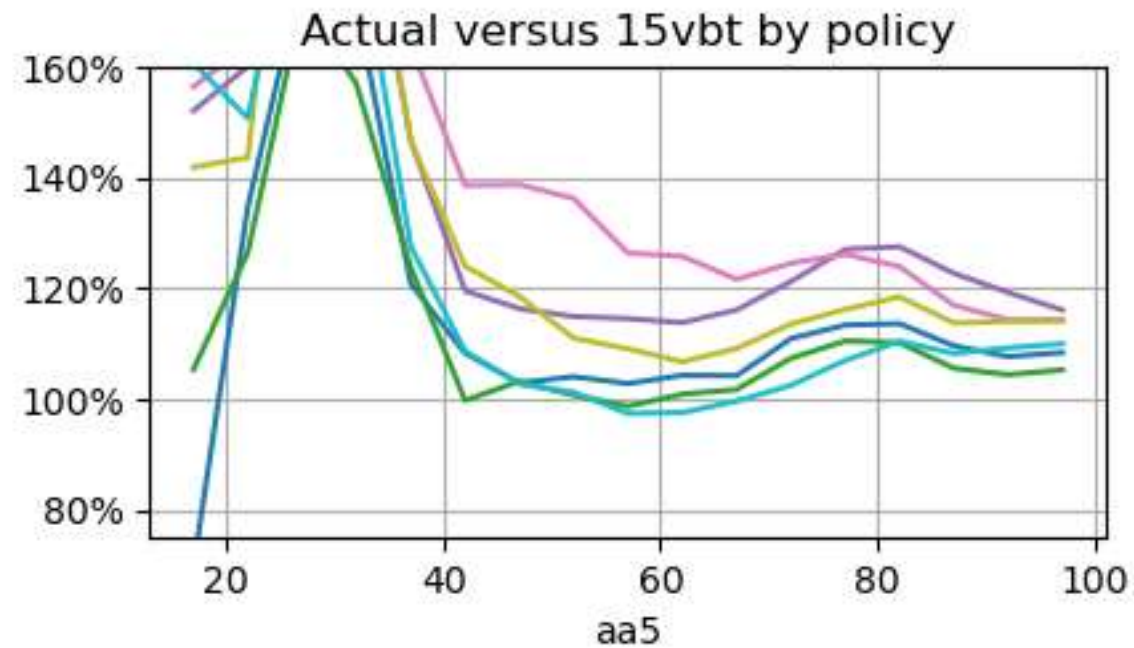


Change in population influenza mortality rates moved similarly to industry data.

If the the industry rattles:
what does it mean for one company?

Here: older ages 50+, because the insured population skews older.

Core set: smoker distinct: policy counts

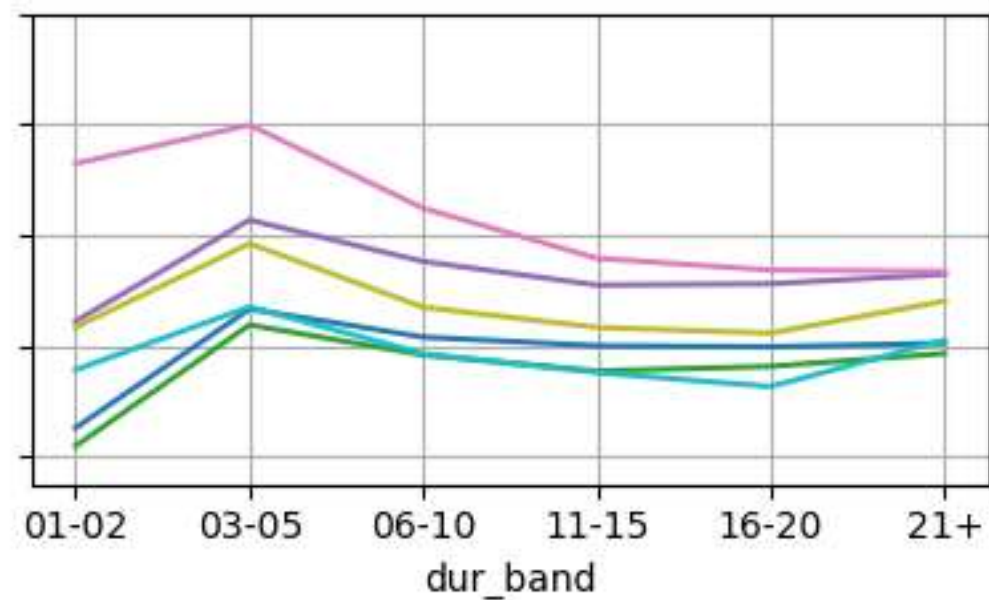
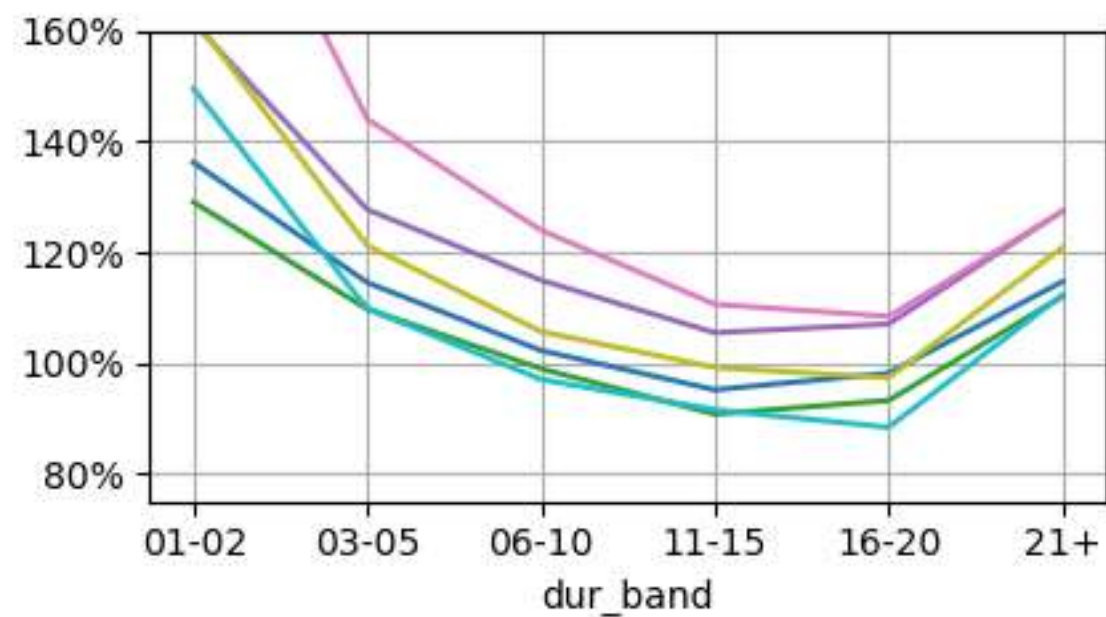


2018 Table is *draft* fit to 2018 mortality rates to control for most available features; goal is to control for mix of business

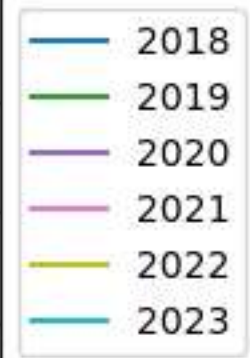
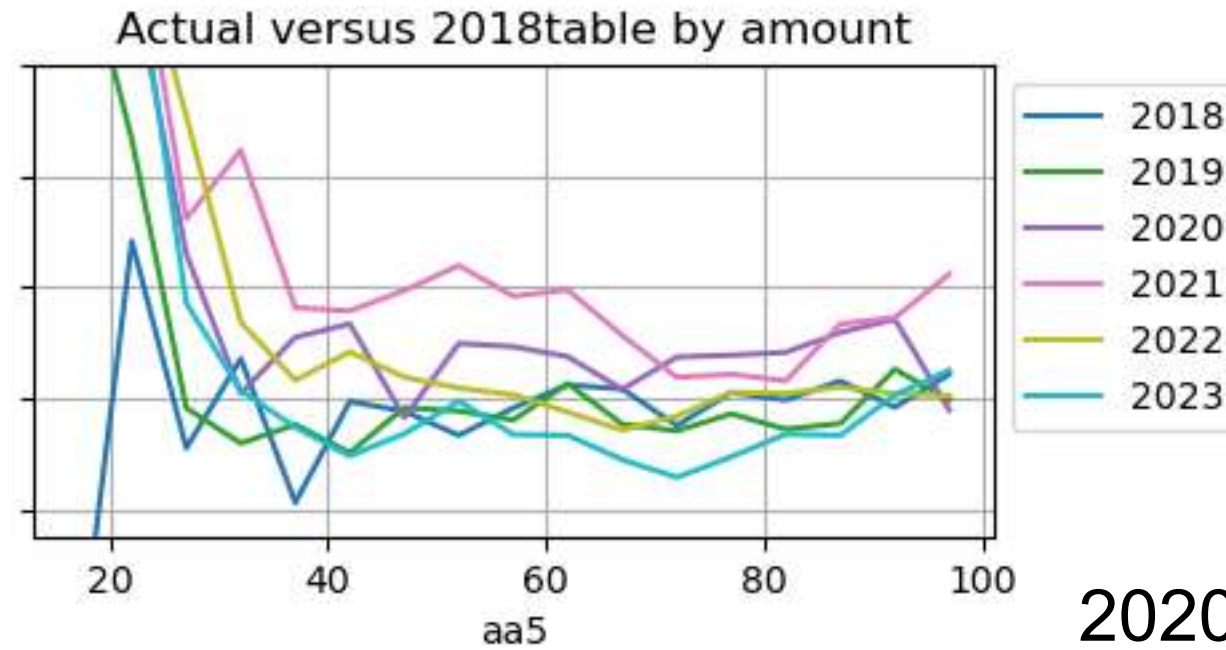
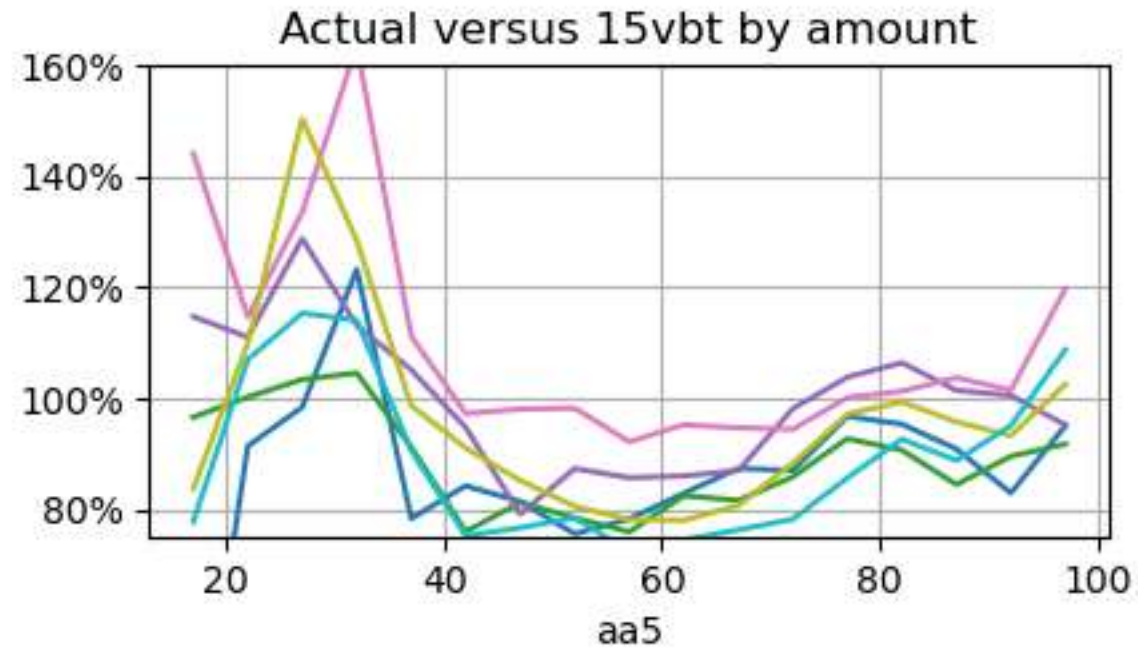
2018-2019: close to 100% for calibrated model (as expected):
2019 somewhat lower

2020: proportionally higher by age
2021: much higher in middle ages
If you have regional data, examine that

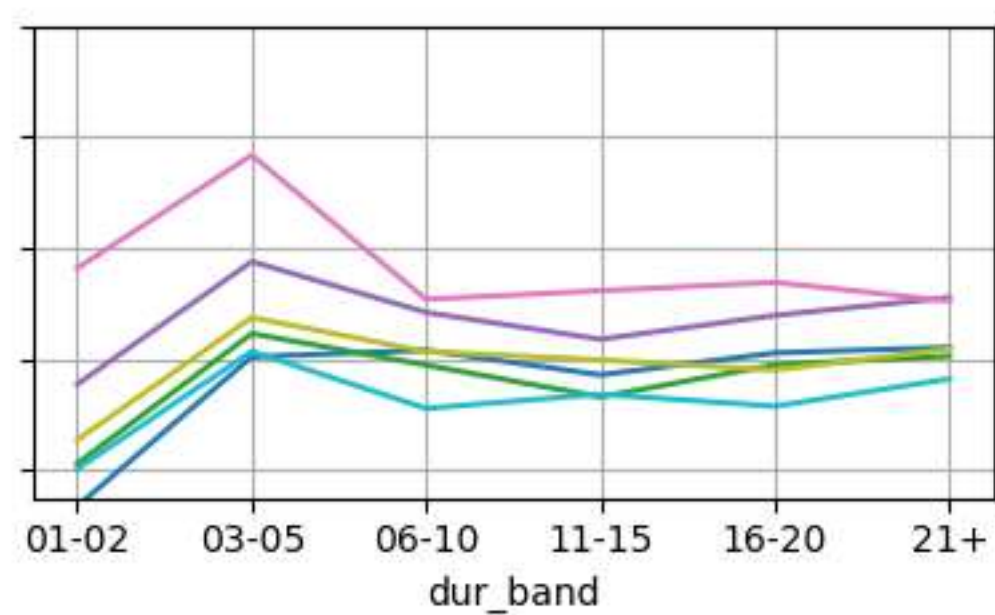
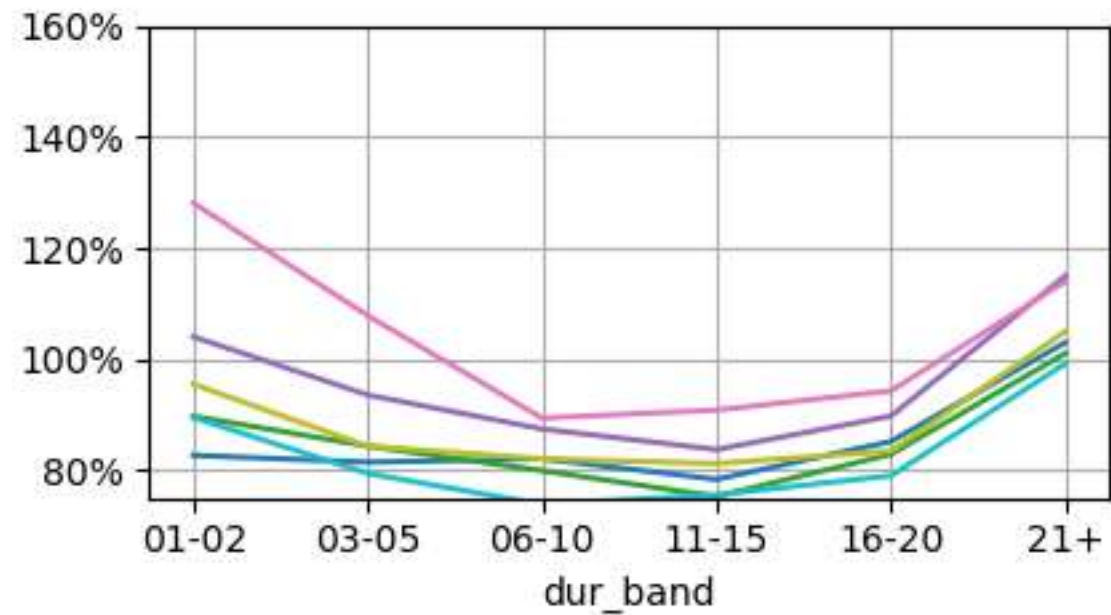
2023: still high below 40, otherwise at or below 2018



Core set: smoker distinct: face amount

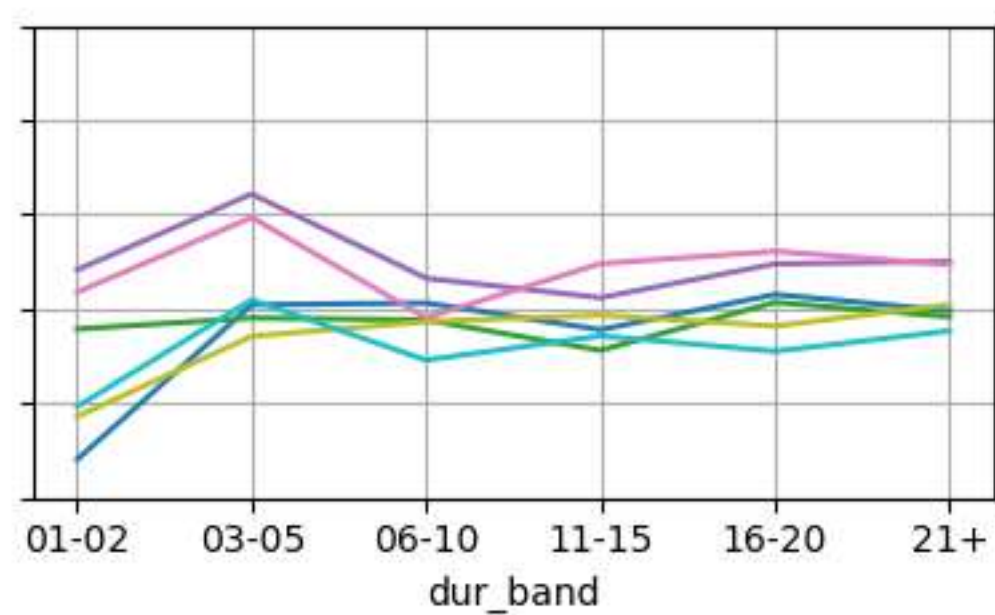
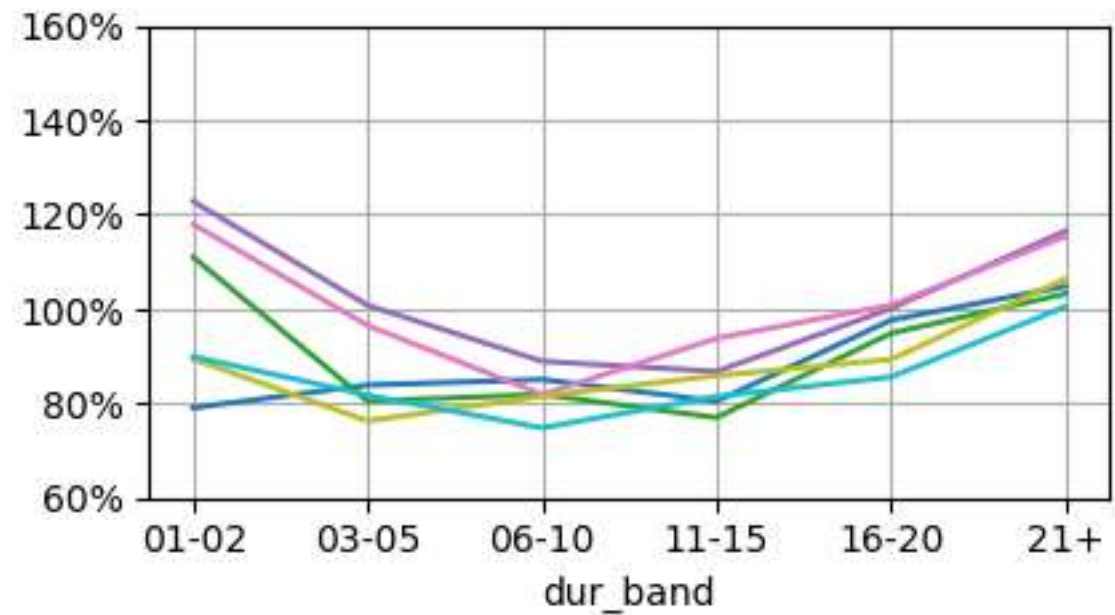
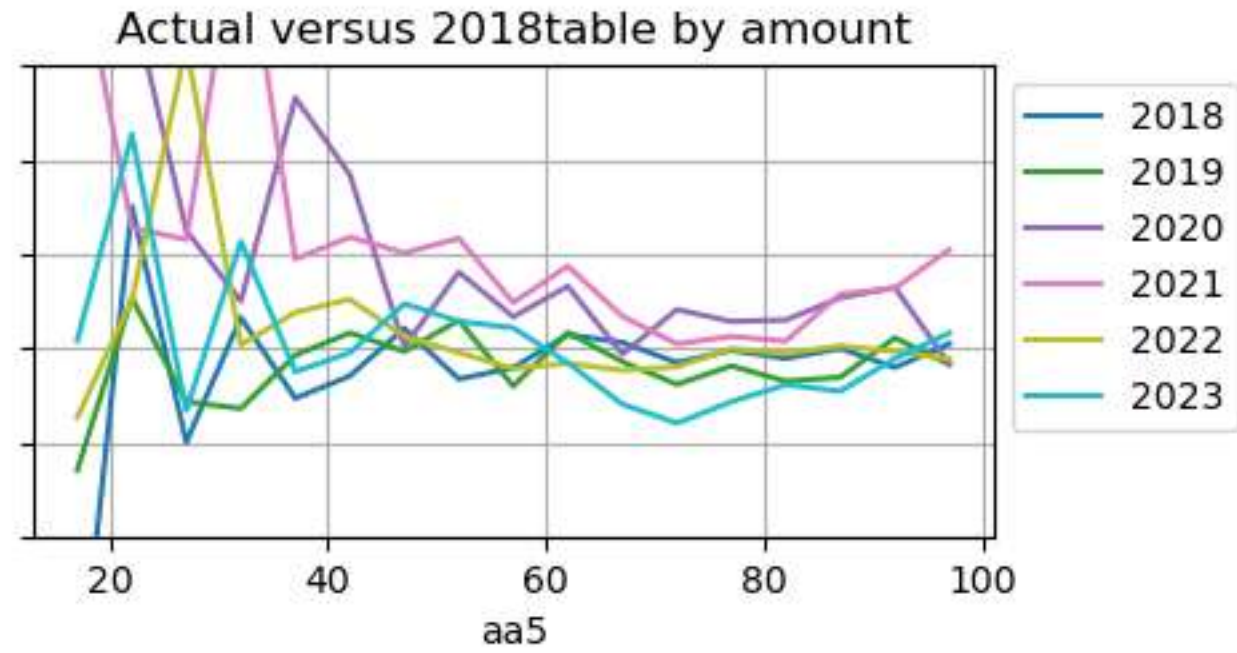
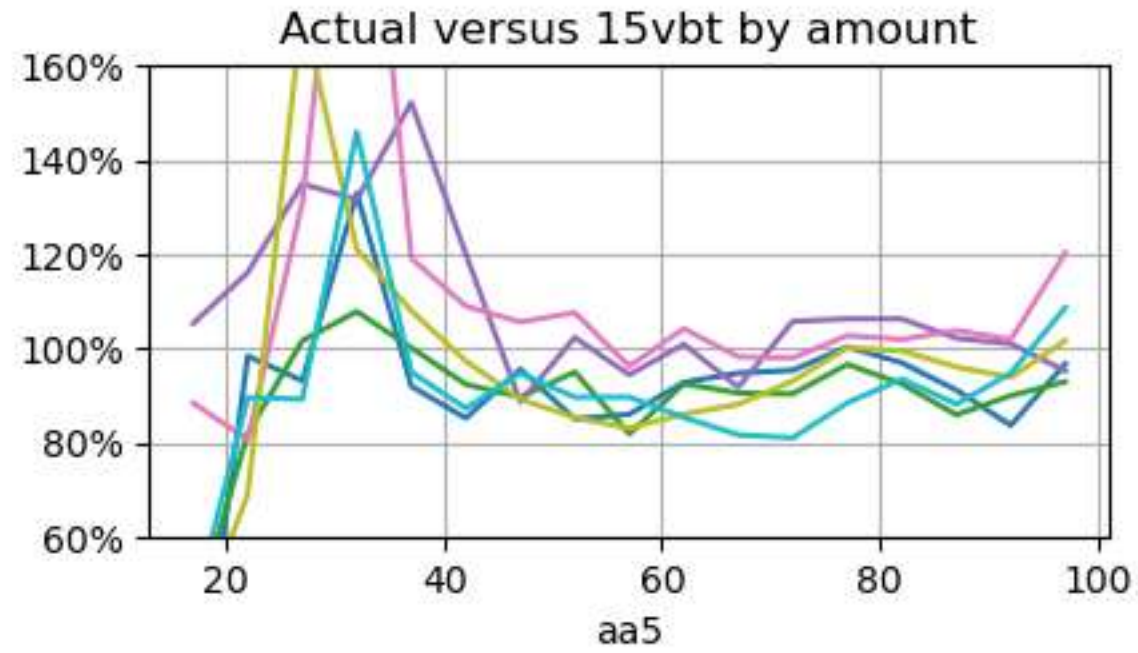


By amount, more volatile, as expected.
 Note – exposure below attained age 30 is thin for adult issues.

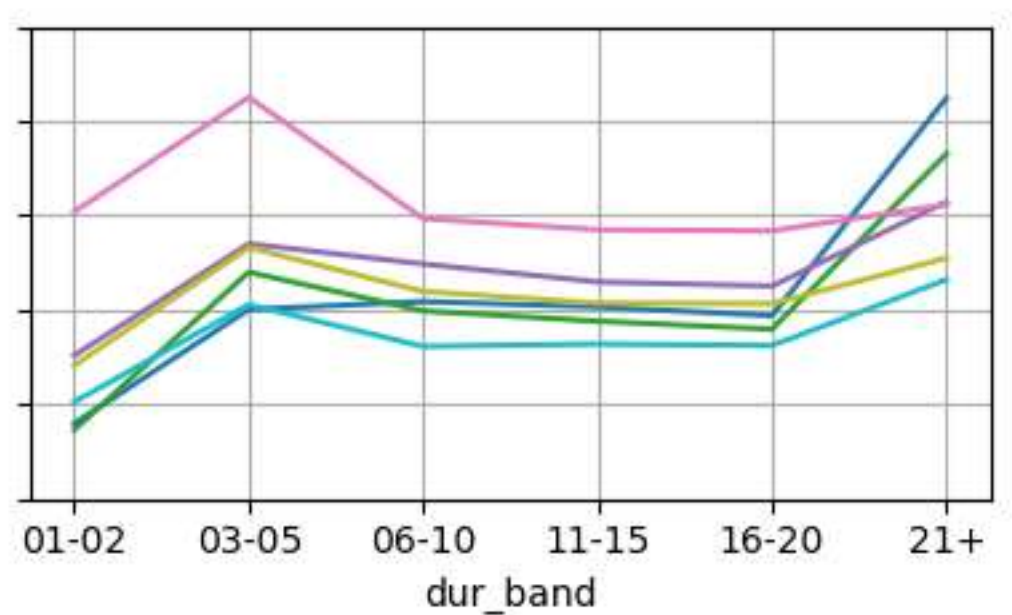
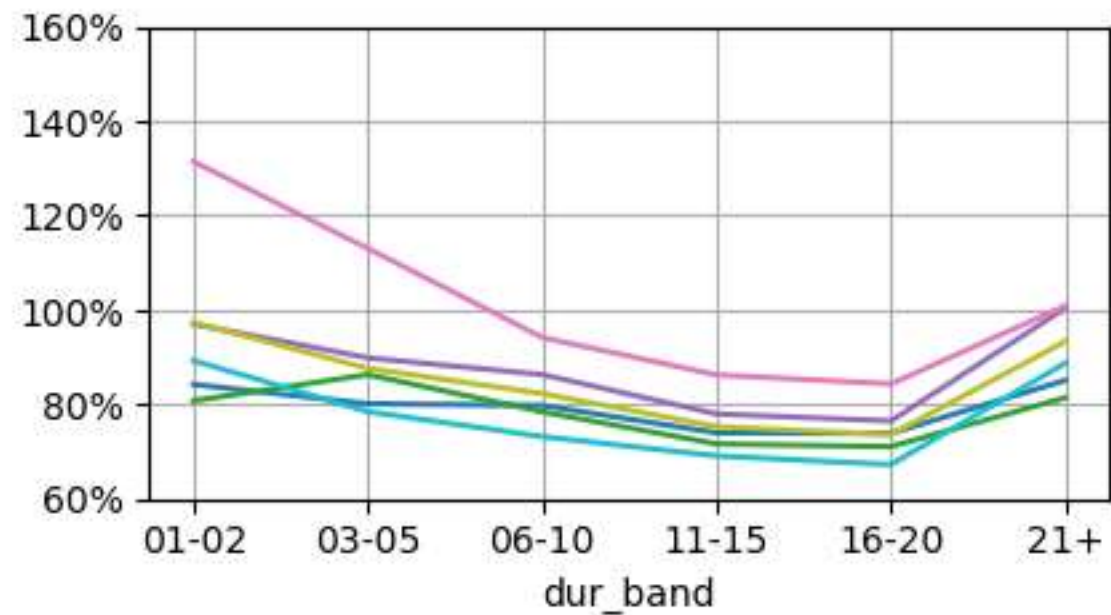
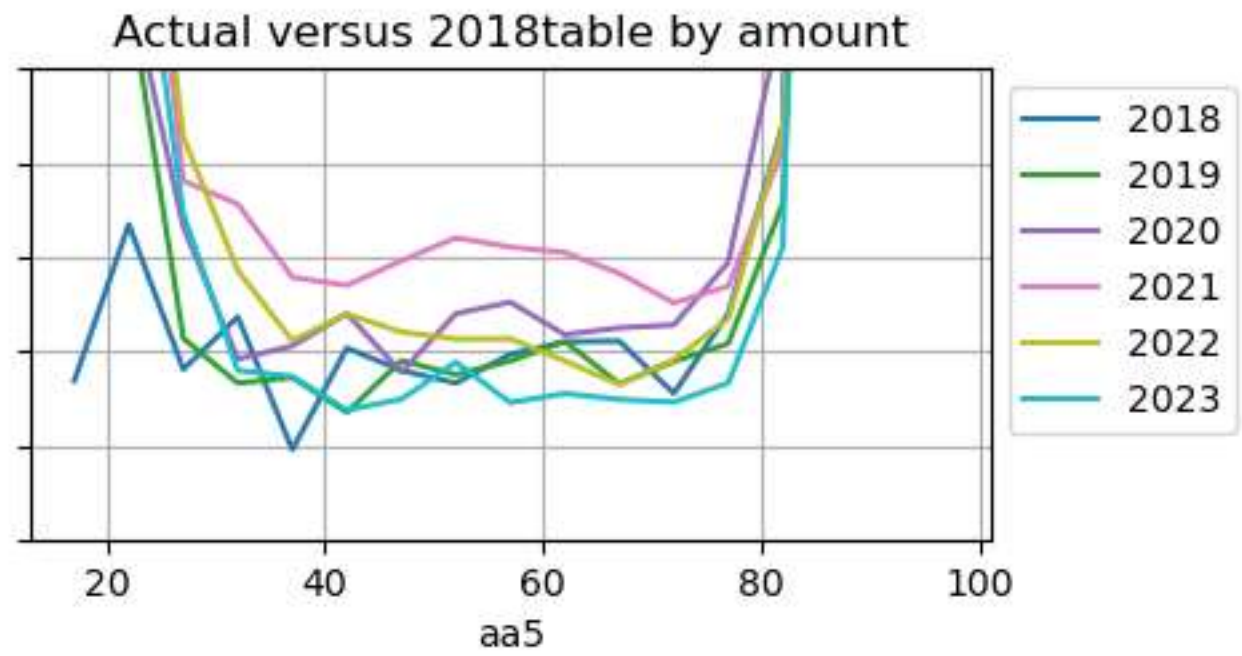
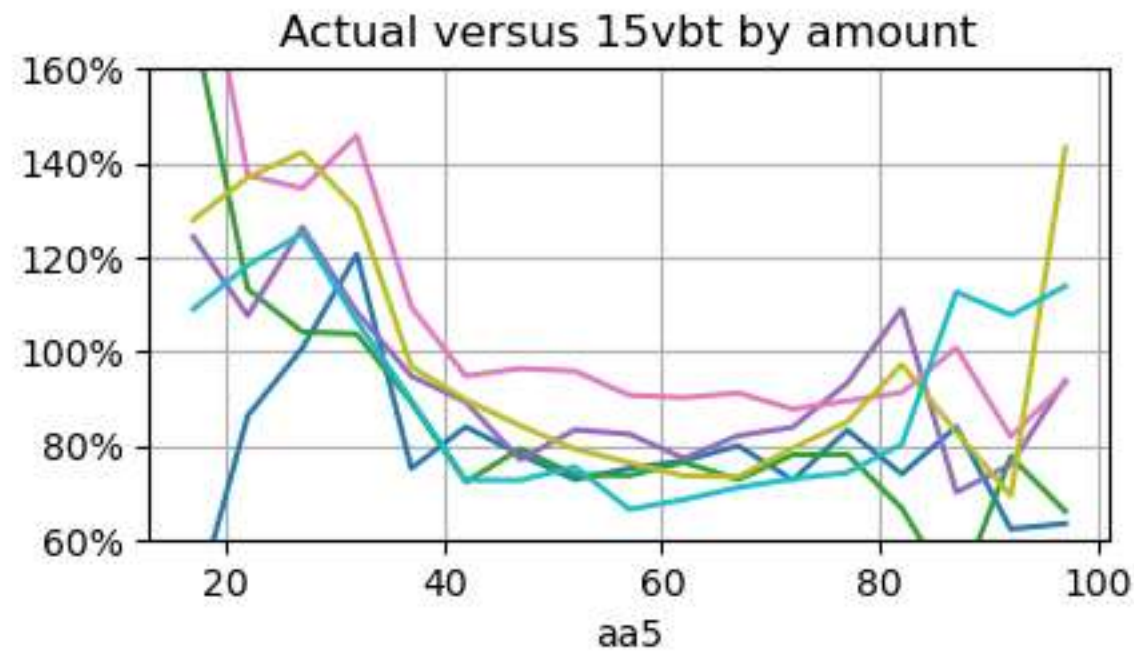


2020: proportionally higher by age
 2021: much higher in middle ages, lower than 2020 in 70s-much of 80s, higher across durations.
If you have regional data, examine that
 2023: below the 2018 calibration across most age and duration groups.

Core set: smoker distinct: non-Term



Core set: smoker distinct: face amount: Term



Note: 2018 table high and low ages: not for prediction; experience extremely thin.

2020: some impact in 50s
 2021: higher across the board
 2022: a mix by age; higher in dur 3-5.

2023: considerably lower than both 2018 and 2019 experience.

Conclusions

The whole industry moves with population.

- Consider high, low periods when developing assumptions.
- Consider volatility in evaluating results.

Controlling for features gives different view.

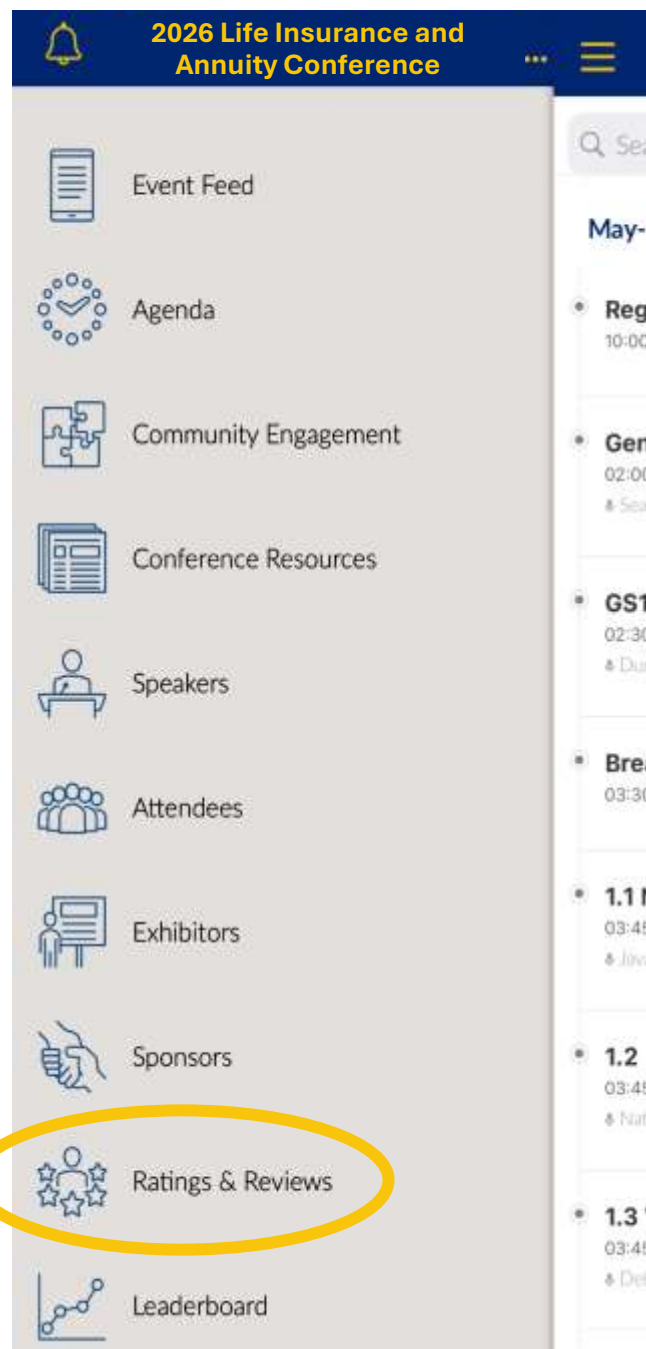
- Year on year volatility and improvement
- Proportion of claims: not much.
- Proportion of profit... a different matter

Company mix matters.

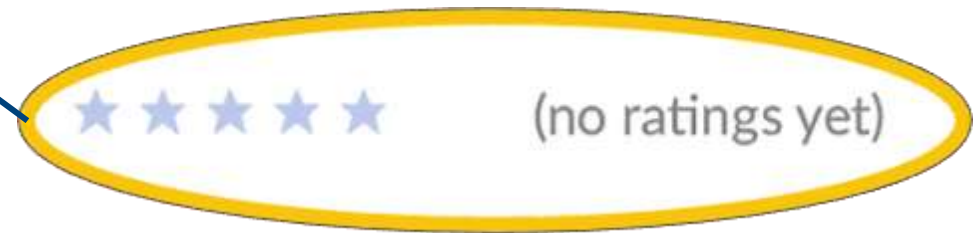
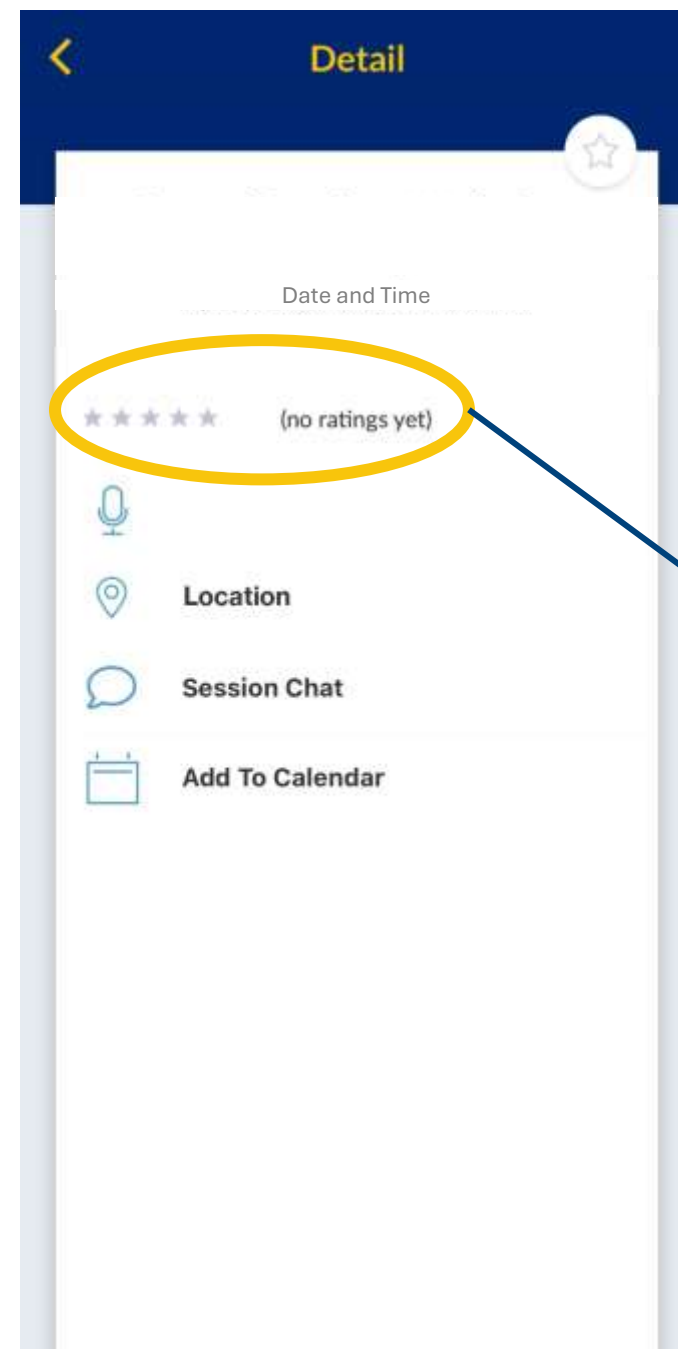
- Systemic risk for industry: different view from different participants; stability is a consideration in drawing conclusions and in table development.
- Even at this level: 2018-19 shift

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Thank You

