

2024  
**SUPPLEMENTAL  
HEALTH, DI & LTC  
CONFERENCE**

The Winning  
Trifecta

**The Impact of  
Inflation on DI**





**Angela Cobble FSA, MAAA**

*Senior Manager*

Oliver Wyman



**Erin Hassing FSA, MAAA**

*Actuary - IDI*

Principal Financial Group



**Daniel Sim FSA, MAAA**

*Head of DI Pricing*

MassMutual



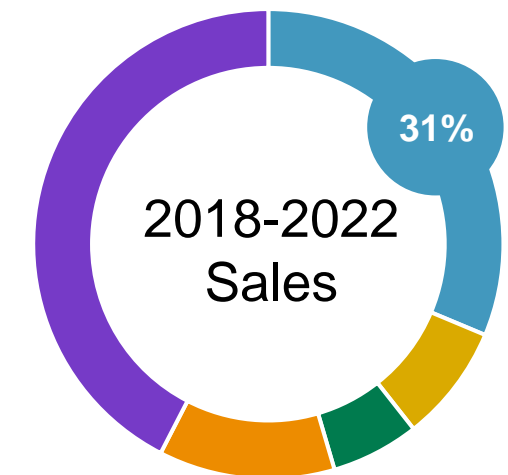
# Disability Income Insurance



**1** Provides insured individuals with income when they can no longer work because of an accident, injury, illness, and/or disability

**2** Pays a percentage of pre-disability earnings for a defined period of time after satisfying an elimination period

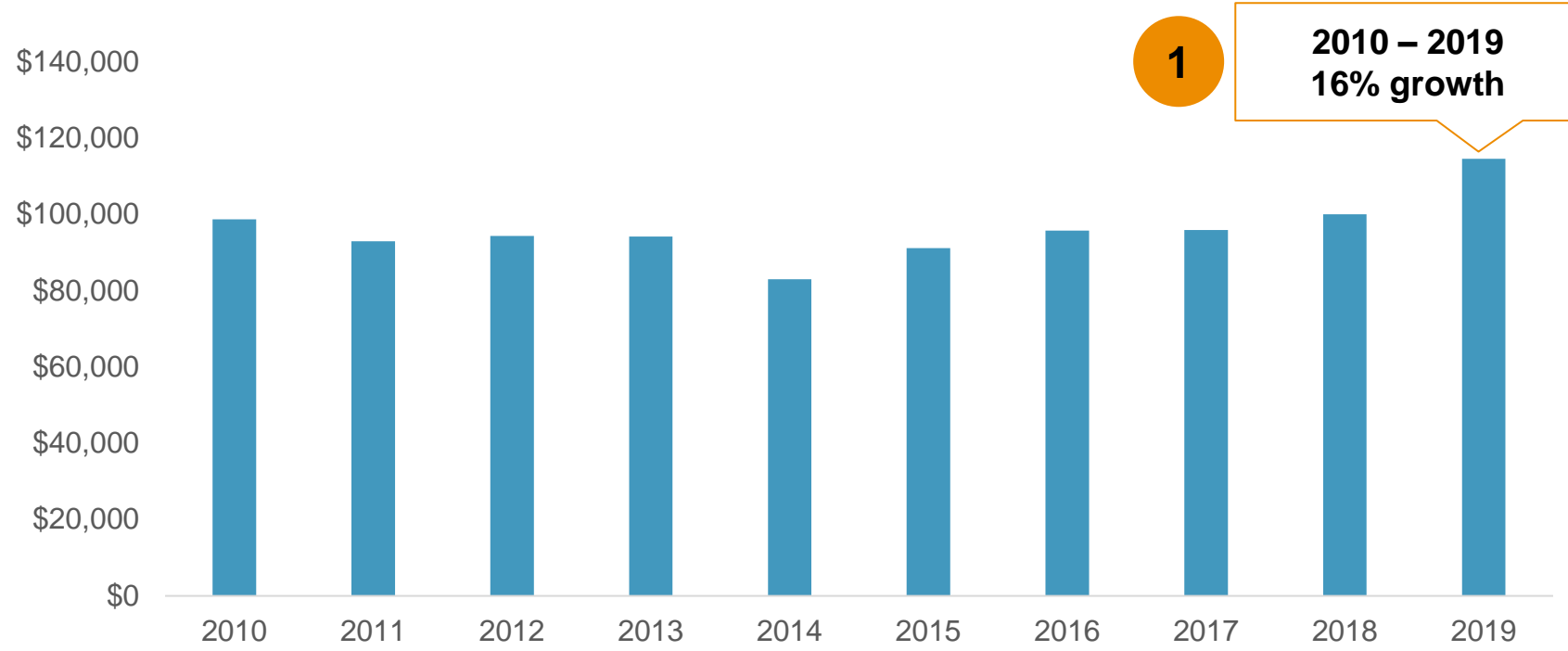
- Doctors
- Dentists
- Lawyers
- Executives
- Other



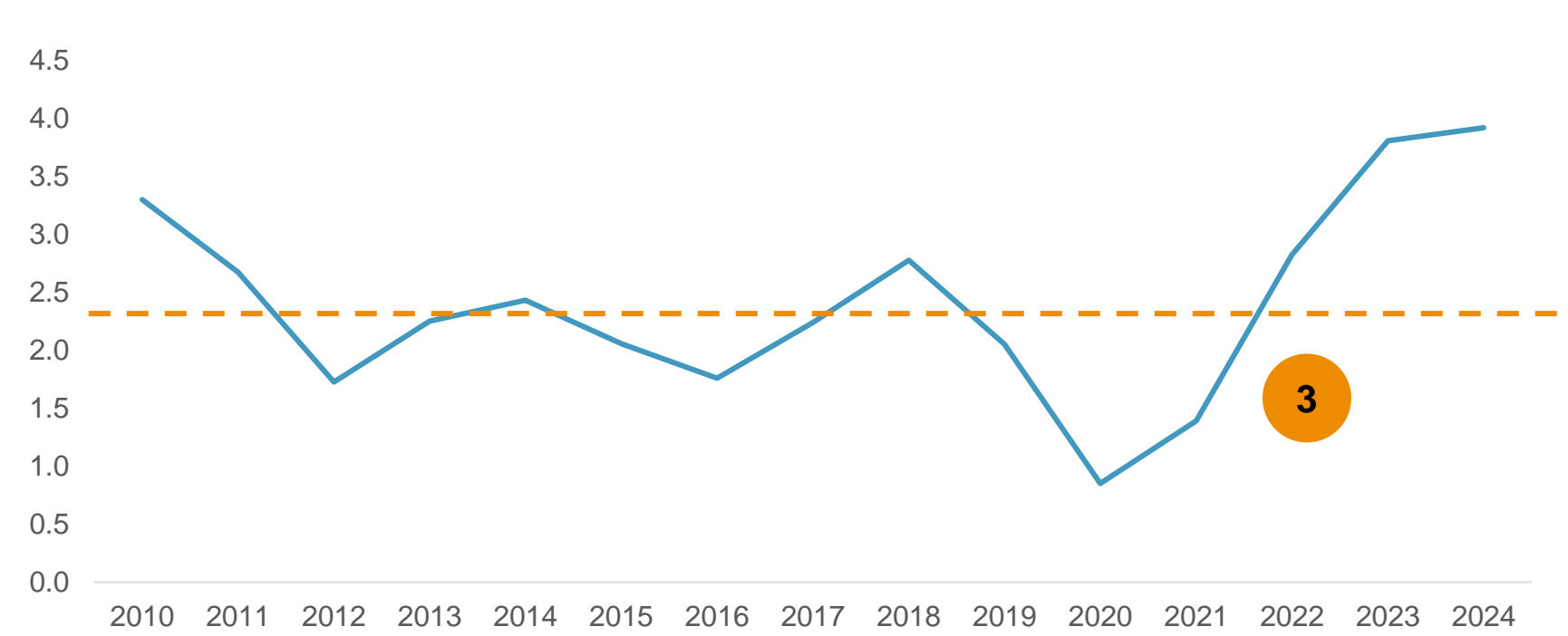
**3** Cost-of-living adjustment rider increases the monthly benefit based on CPI index or fixed percent

# Macro-Economic Environment

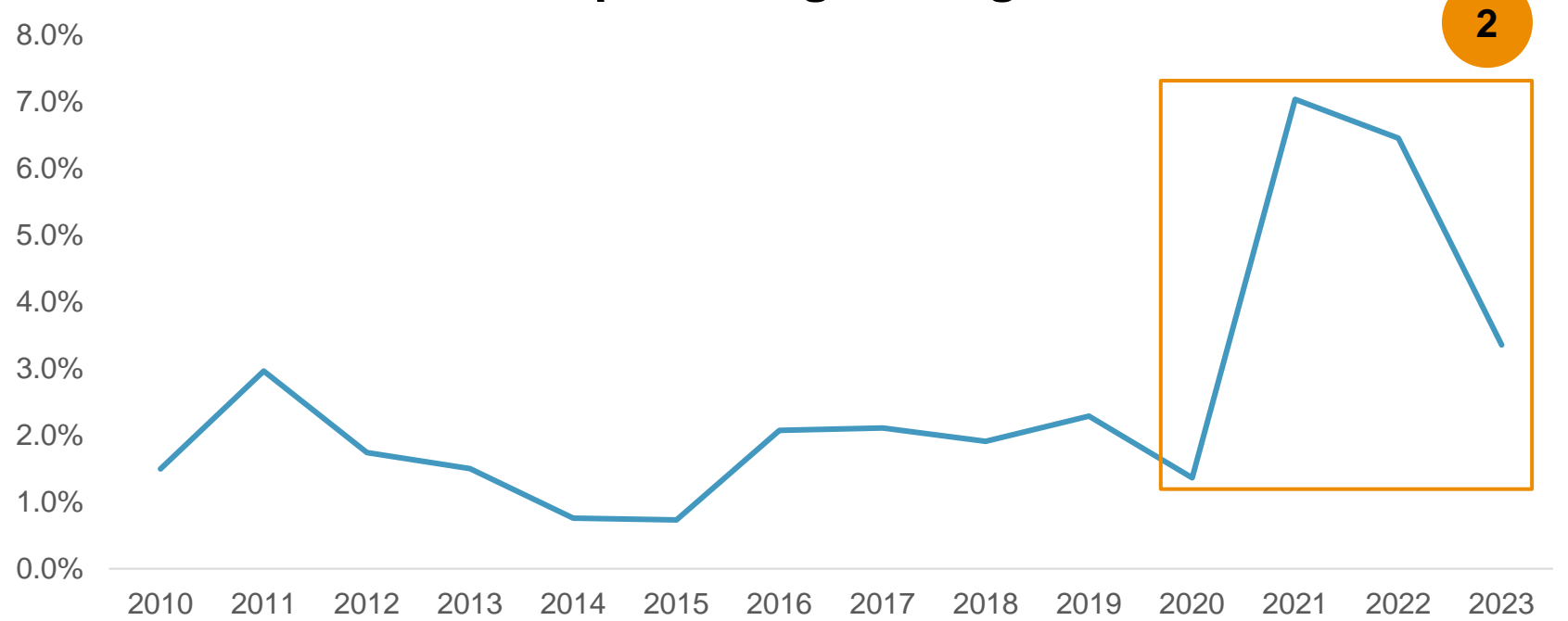
### Physicians and surgeons' median nominal earnings



### 10 Year Treasury yield



### Annual percentage change in CPI



**1** Wage growth driven by macro environment

**2** Higher-than anticipated inflation

**3** Lower-than anticipated investment yields

### Implications to

- Pricing
- Valuation

## Benefit increases

The IDI market is full of riders designed to help policyholders keep their benefit current as their income rises

1

Fixed rate increase

2

Tied to inflation increase

3

Based directly on information provided by the policyholder

4

Pool of money purchased at issue

With higher inflation, there can be pros and cons to each of these:

Are the benefits staying in line with their income?

Does your structure incent the right behavior and price for or limit selection?

# Pricing

## Policyholder demographics

---

Issue age, sex, occupation class, geographic area, smoker/non-smoker

## Policy provisions

---

Benefit period, definition of disability, mental/nervous limitations, optional riders

Majority of policies are issued with level premium over the life of the contract

## Macro-economic environment

---

Future interest rate expectations, investment earnings

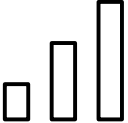

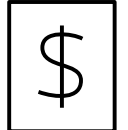
## Actuarial assumptions

---


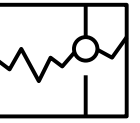

Morbidity, mortality, lapse, expenses, commissions, target RBC ratio, etc

# Inflation and Implications To Pricing

## Wage growth drives higher benefit amount

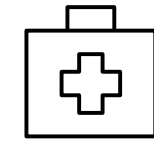
- 1  Inflation
- 2  Salary growth
- 3  Benefit amount  
Maximum I&P limits

## Higher asset earned rate drives higher profits

- 1  Higher interest rate
- 2  Higher investment income
- 3  Increased internal rate of return  
Improved value of new business

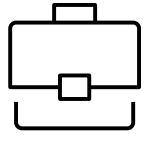
2023 IDI sales growth driven by higher benefit amount

- +3%** Policies
- +8%** Premium
- +10%** Benefit amount



**30,000**

Medical Occ class



**35,000**

Non-Med Occ Class

2023 IDI highest issue and participation limits

Industry impacts

- 1 Competitive pricing
- 2 Expansion of discounts
- 3 Higher maximum I&P limits
- 4 Higher future increase options



# Cost of Living Adjustment (COLA) Riders



This can be based on a fixed percentage, or tied to inflation where the claimant receives an annual increase in their benefits while on claim. It's possible for the inflation version to have a cap, or limit on how high the benefits could be increased.

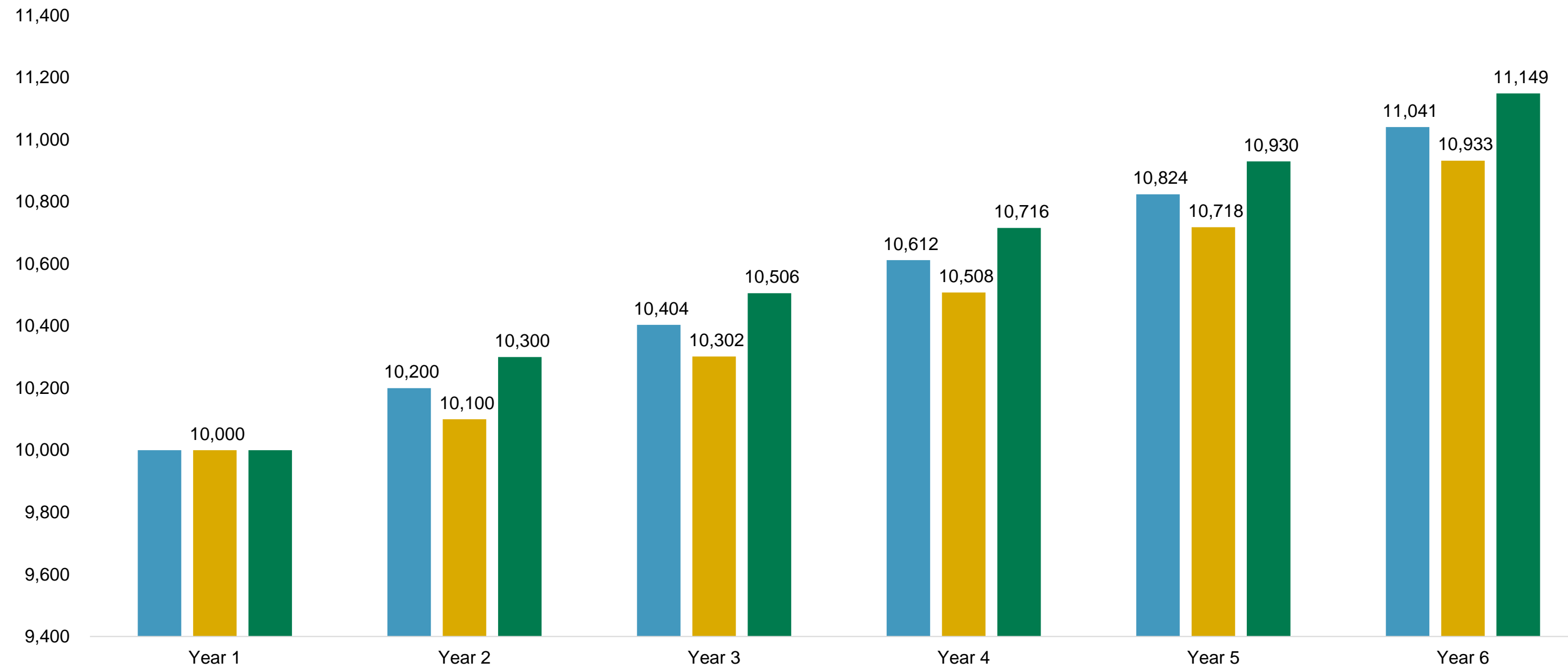
## Short term impacts of higher inflation depend on underlying reserve assumptions

- A fixed benefit increase with a reserving assumption that matches? No impact
- If the benefit is tied to CPI, the impact is going to be heavily dependent upon what assumption is used and how that compares to the actual CPI rate in any given year



# Example

Prior to the post-covid run-up, we had seen CPI-U average between 2-2.5%, so let's assume we choose 2%.



■ Benefit stream projected in the reserve    ■ In a year where 1% is the actual inflation    ■ In a year where 3% is the actual inflation

# Cost of Living Adjustment (COLA) Riders

1

We could see a difference in rates between those that have a COLA rider and those that don't

2

The 2013 IDEC table (based on info from 1990-2007) has an **83.5% modifier applied to termination rates** for those with a To XX benefit period and a COLA rider (vs. 100% modifier to policies without a COLA rider)

3

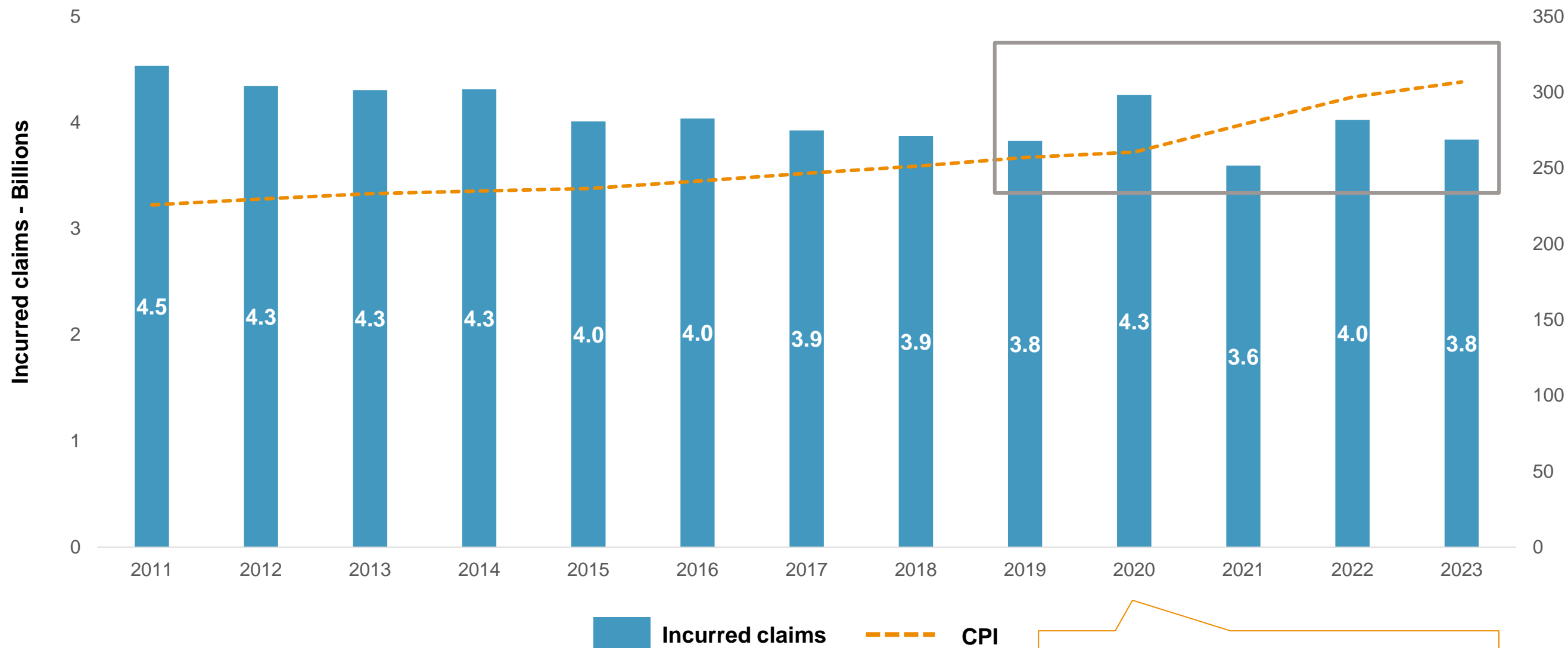
The 2006-2014 Experience Adjustments released in 2021 have modifiers below to apply **on top of the existing modifiers**: 111.9% with COLA and 93.5% without a COLA rider, leading to similar experience between these two.

Long-term impacts of higher inflation

# Economic Stress May Exacerbate Mental Health and Physical Ailments

## Does inflation impact policyholder behavior?

IDI incurred claims<sup>1</sup> and CPI level



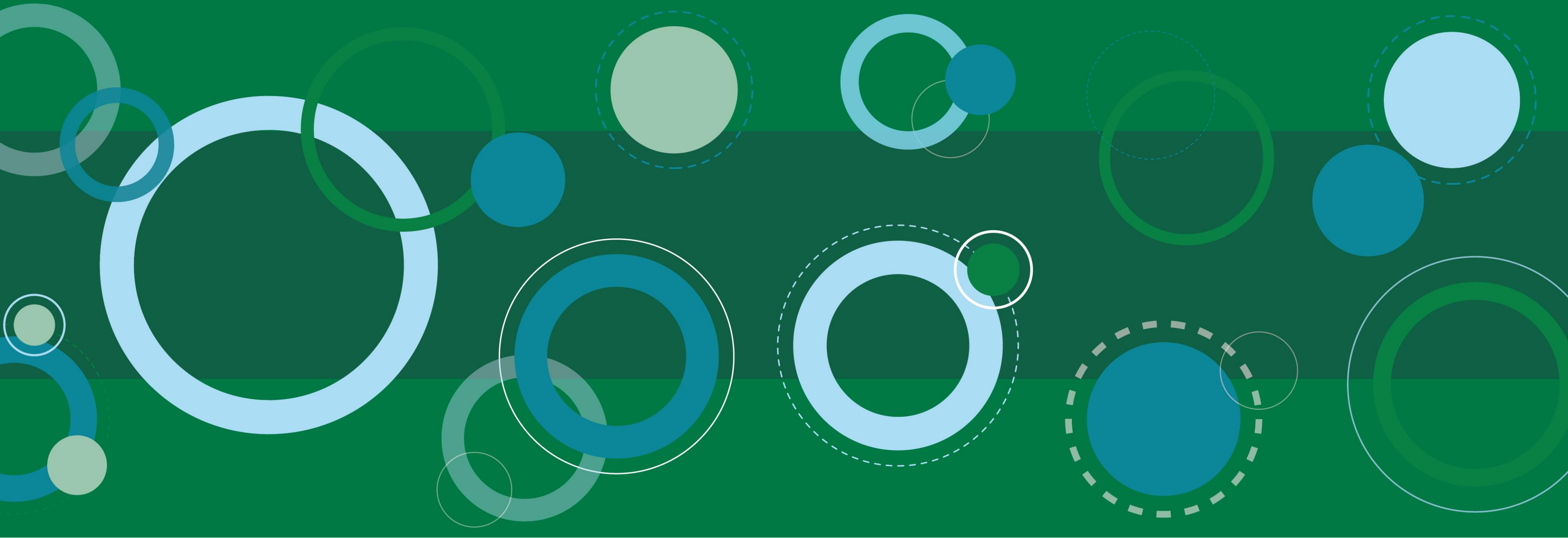
What are potential drivers of the recent incurred claim patterns?



The COVID-19 recession in 2020 was followed by strong economic recovery in 2021 and 2022

Source: 2024 US Accident and Health Insurance Market Report, S&P.



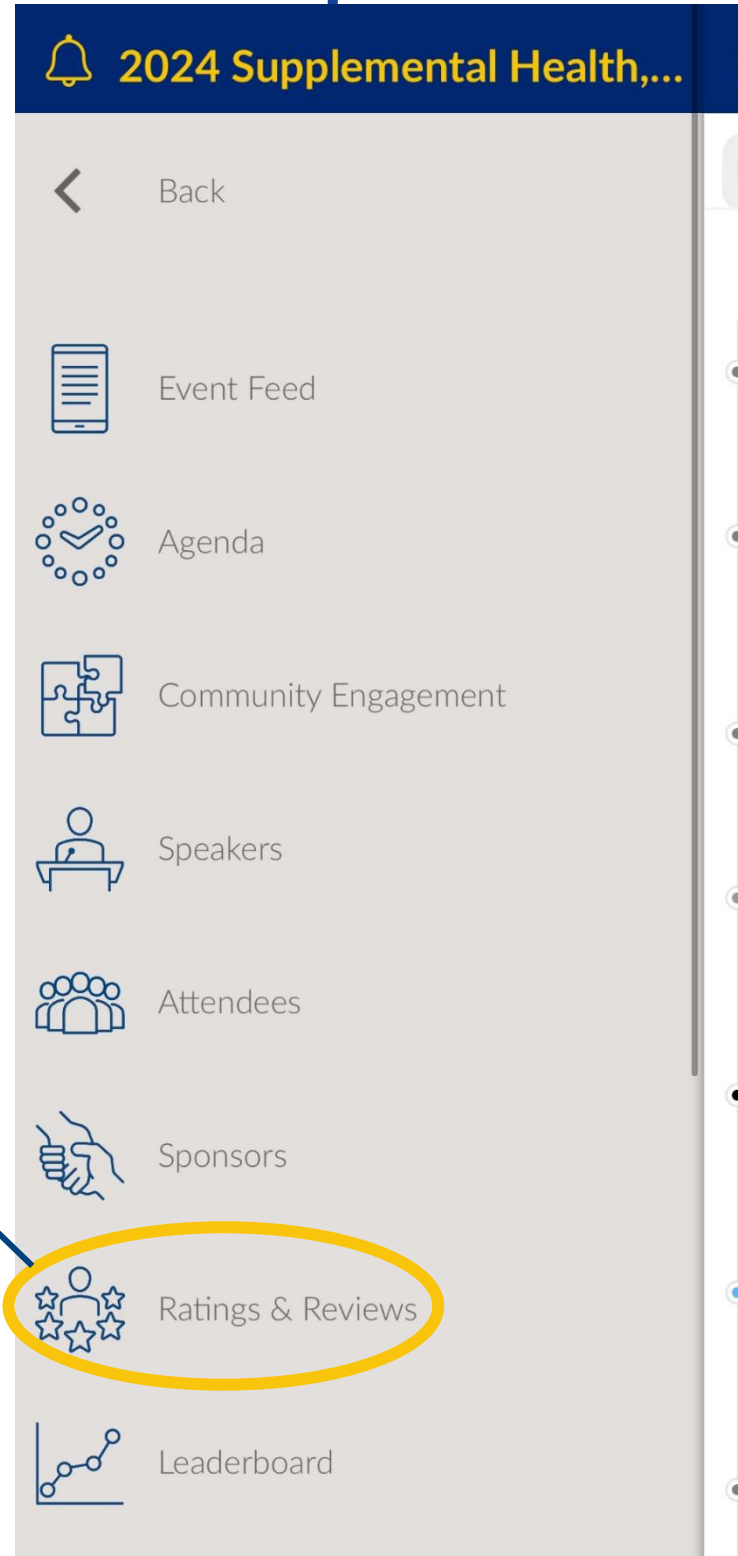


# Q&A

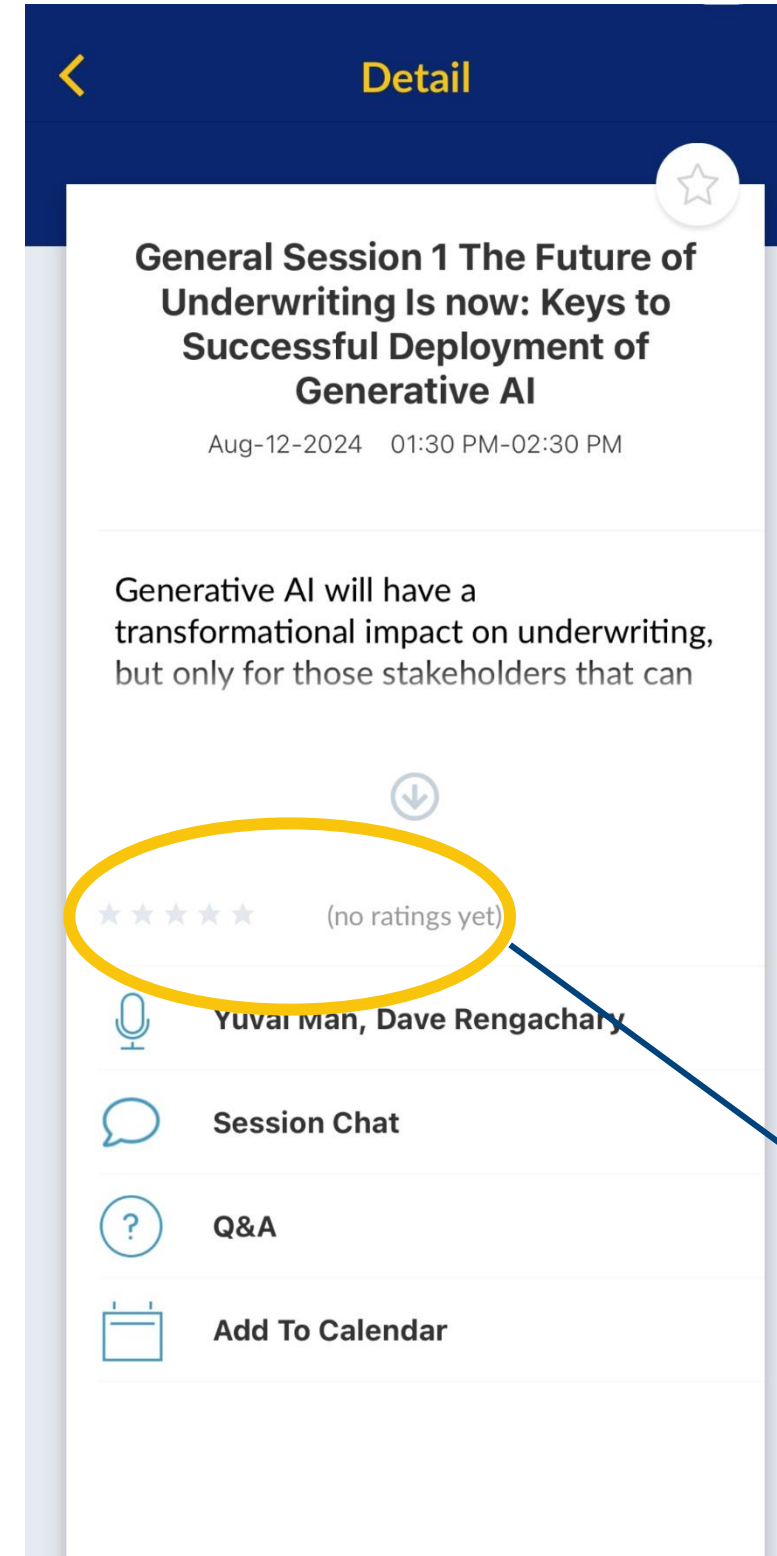


# We Want to Hear From You. Leave a Rating & Review.

## Module Option



## Agenda Option



# Thank You

