

Behavioral Analytics Advisory Council

How did our March 2020 predictions shake out?

August 19, 2021

2:00 – 3:00pm Eastern

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We aim to be the platform
and industry benchmark
for principles-based
insurance data analytics
and risk management



FIA

thru Q3 2020

Mortality

incl COVID impact

2021

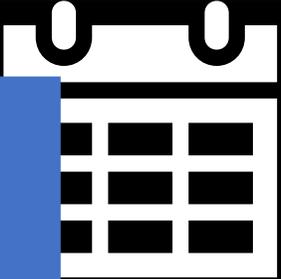
VA

thru Q4 2020

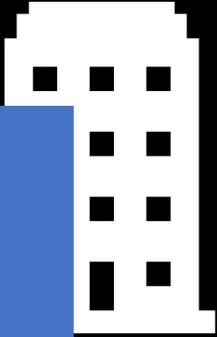
FIA

thru Q3 2020

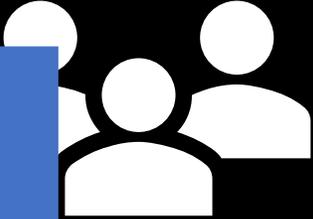
'07



16



4m

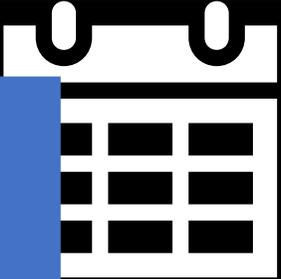


264b

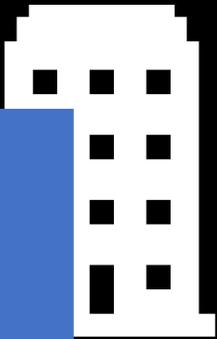


VA
thru Q4 2020

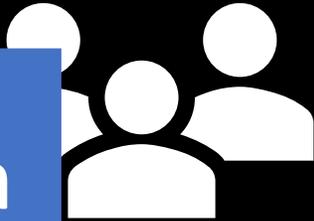
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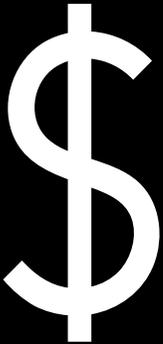
21

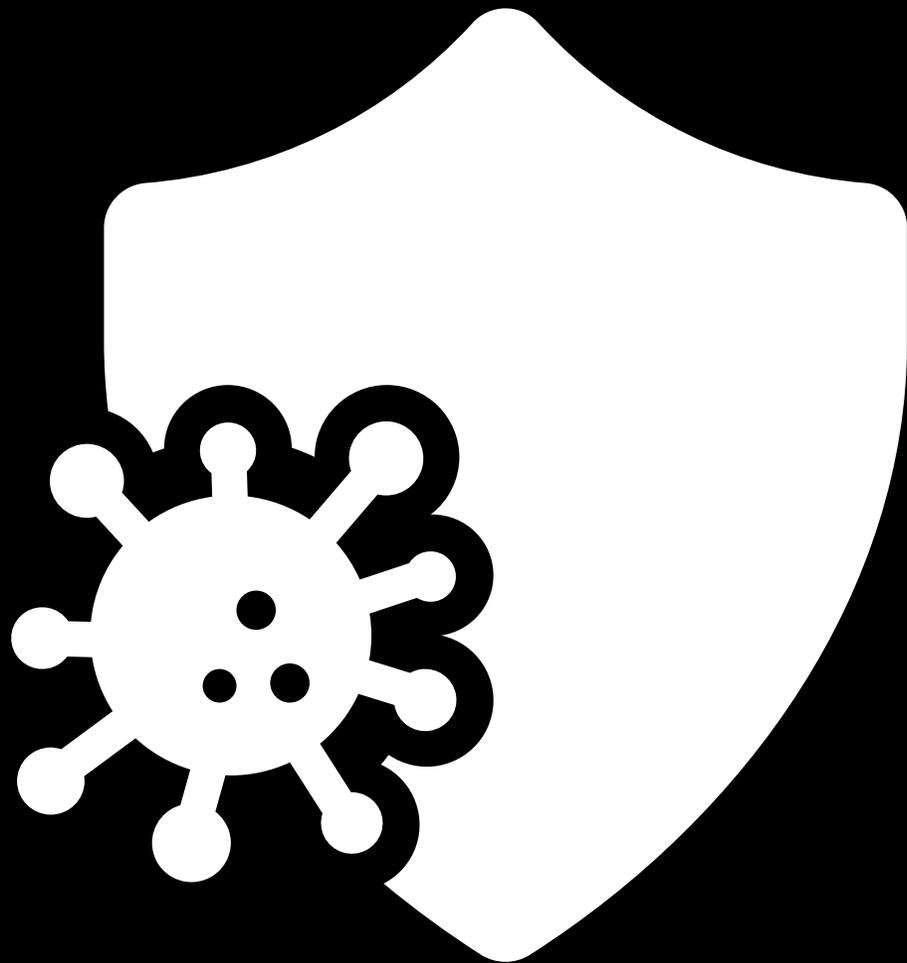


15m



768b





November
VA mortality study
thru Q4 2020



DATA ANALYTICS | INNOVATION & TECHNOLOGY

Demonstrating the Value of Data

How to make the case for buying the data you need

TIMOTHY PARIS AND MICHAEL FRINGS

NOVEMBER 2020

Photo: [iStock.com/MicroStockHub](https://www.istock.com/photo/microstockhub)

More data is available than ever before. Actuaries love data! Our ability to analyze and use data has grown tremendously. However, we need to obtain data to use it—and data is not cheap. Making the case for buying the data is critical.

For the June/July 2018 issue of *The Actuary*, I wrote an article, “[When Is Your Own Data Not Enough?](#)” which

focused on situations where using external data can strengthen your actuarial work. The article also

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Make your business case using KPIs



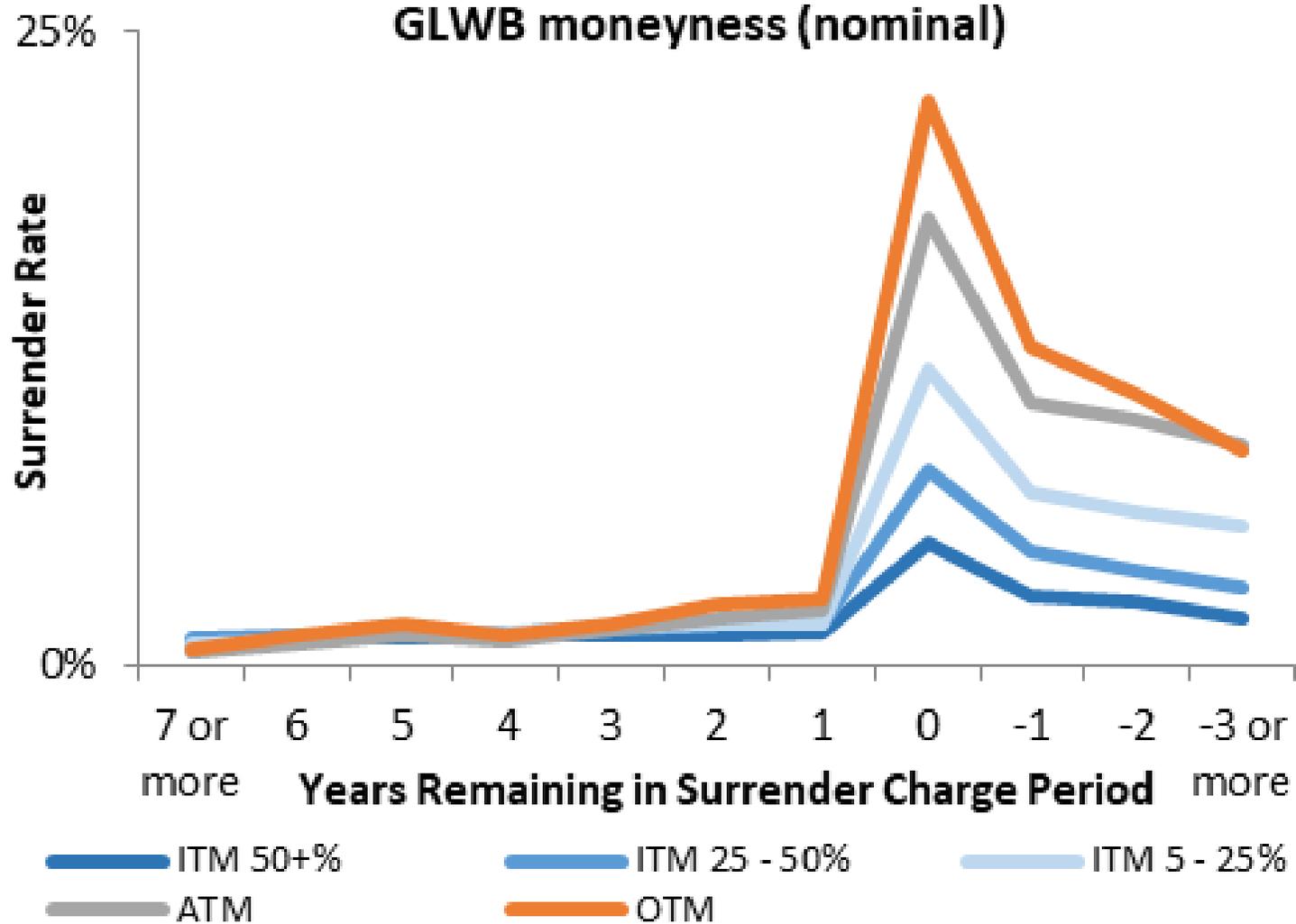
When once in a
century happens
twice in 13 years



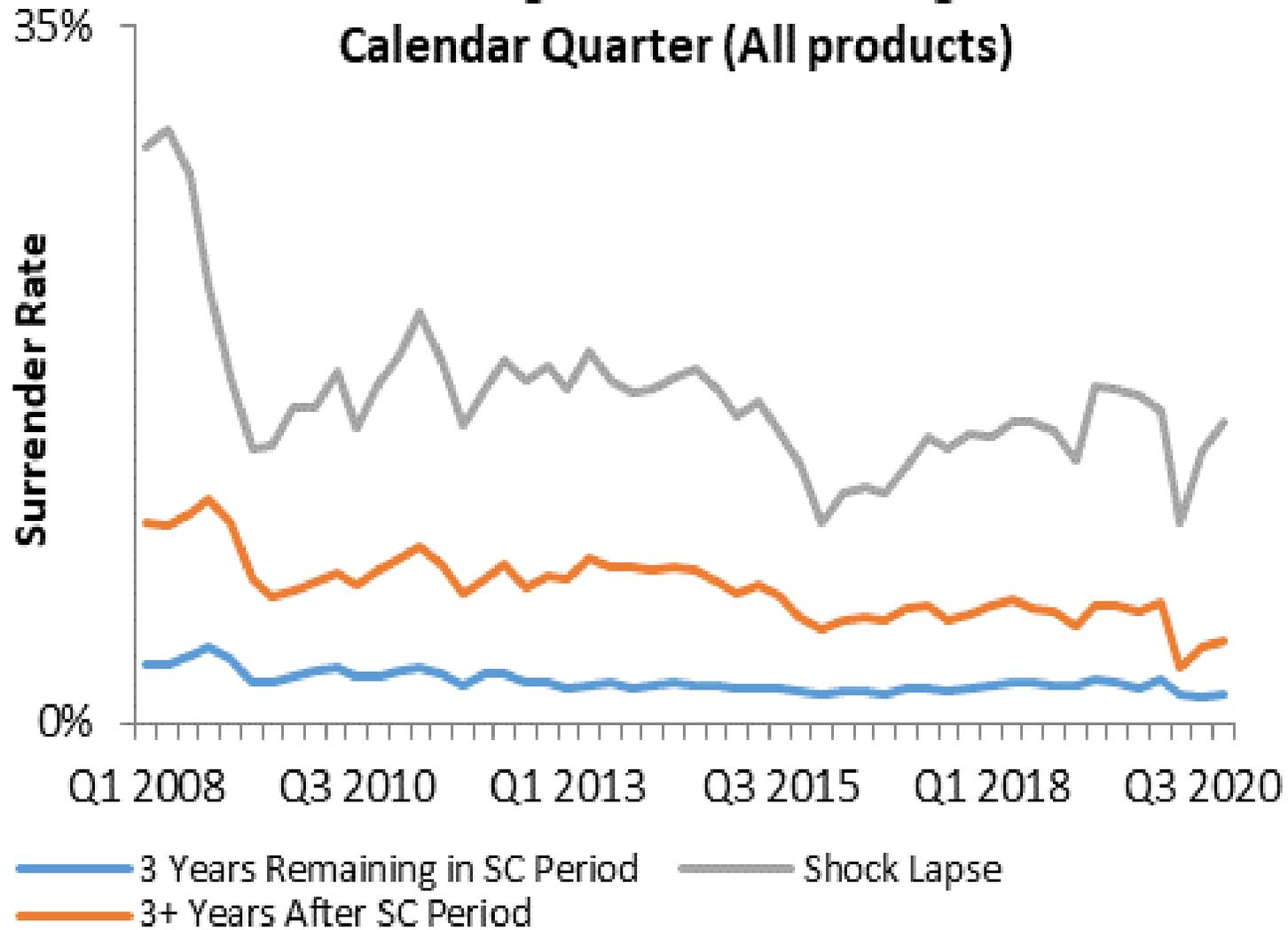
Whitepaper

Variable Annuities

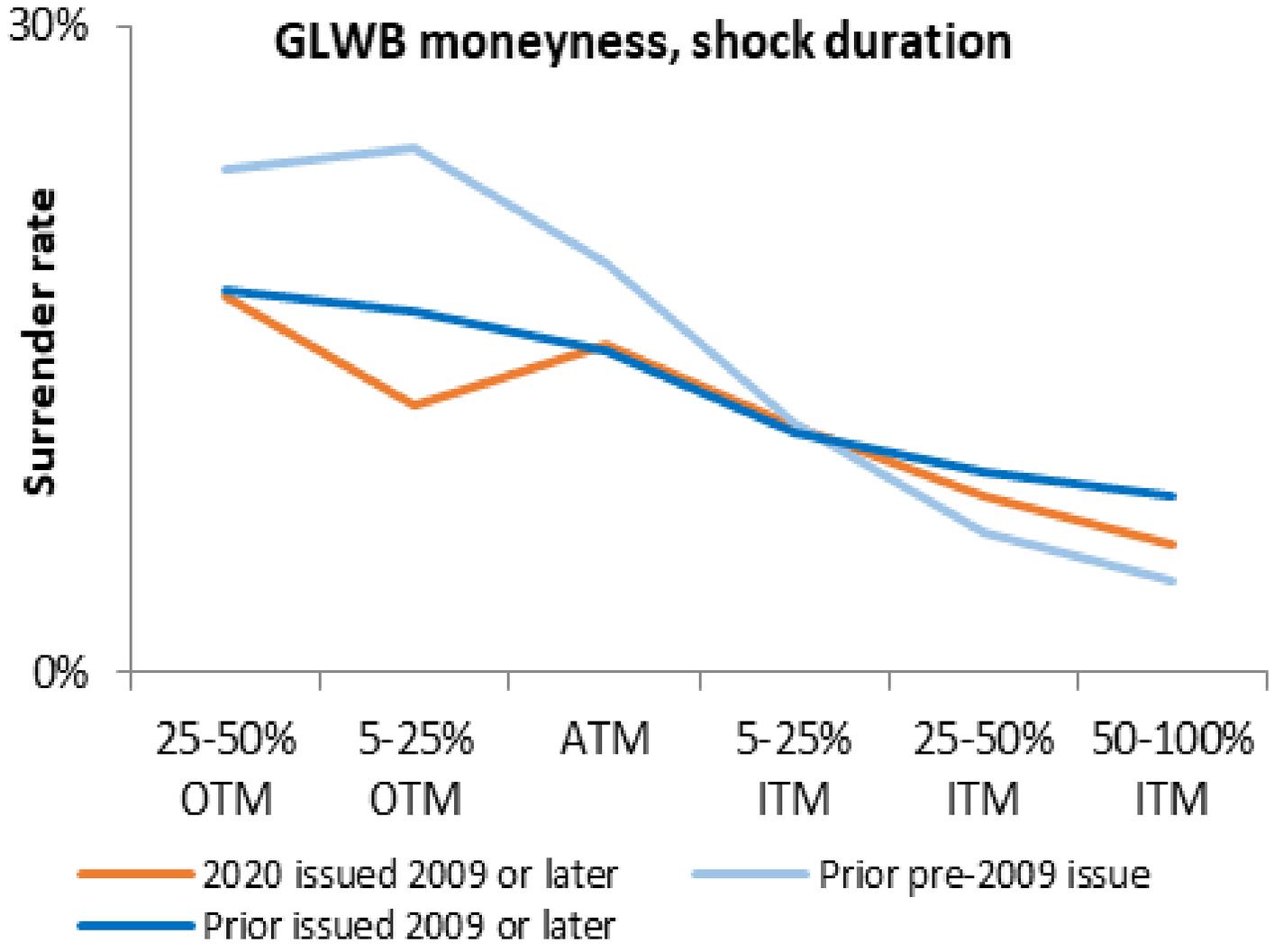
Years Remaining in Surrender Charge Period & GLWB moneyness (nominal)



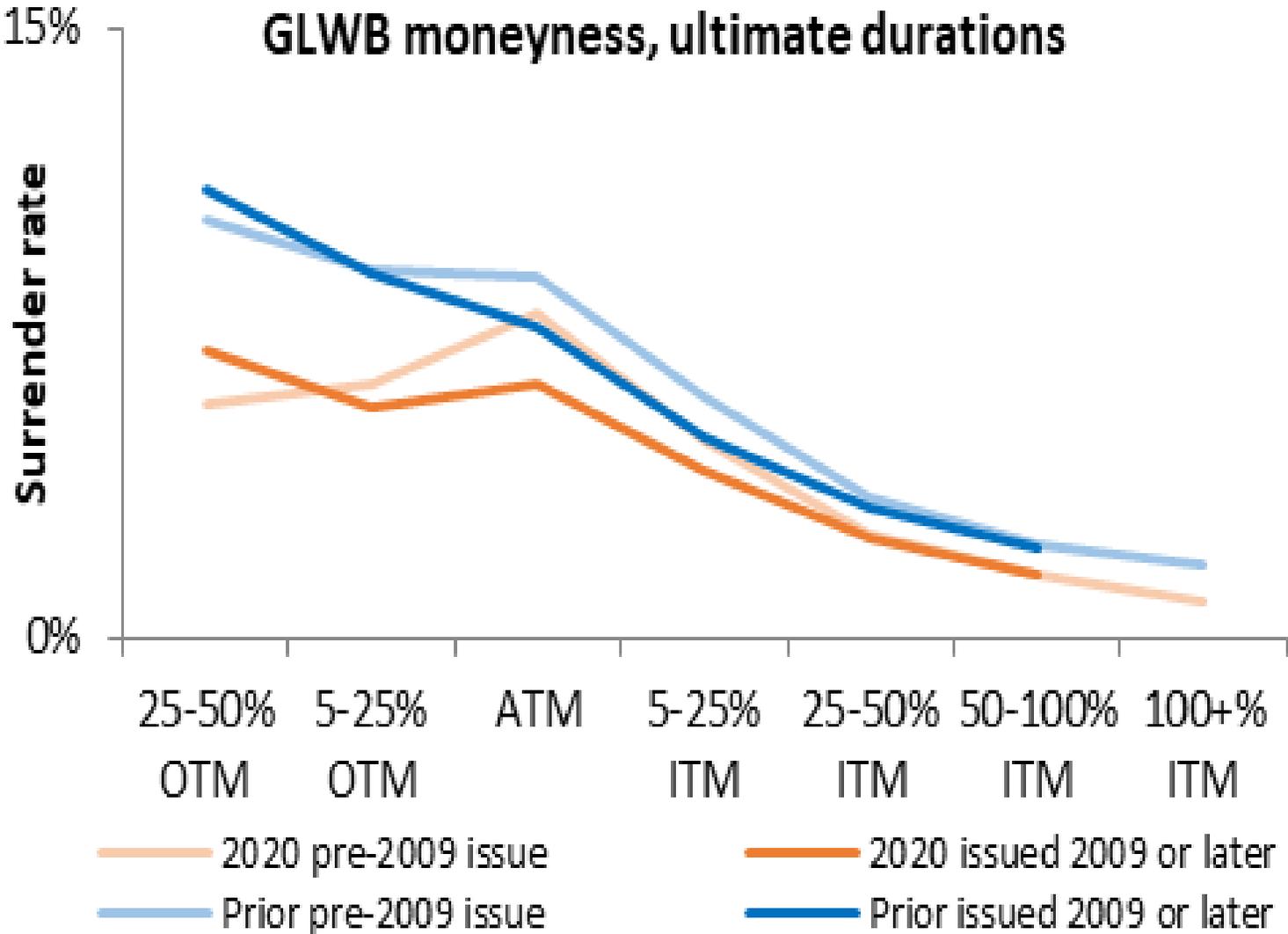
Years Remaining in Surrender Charge Period & Calendar Quarter (All products)



GLWB moneyness, shock duration



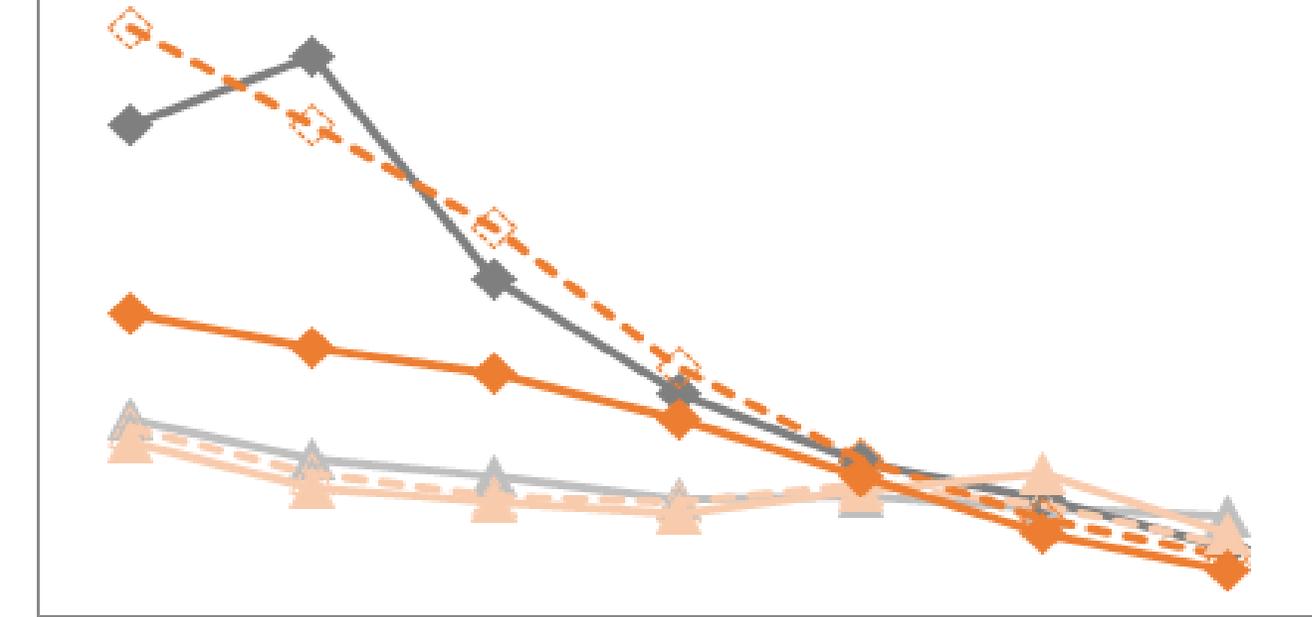
GLWB moneyness, ultimate durations



30%

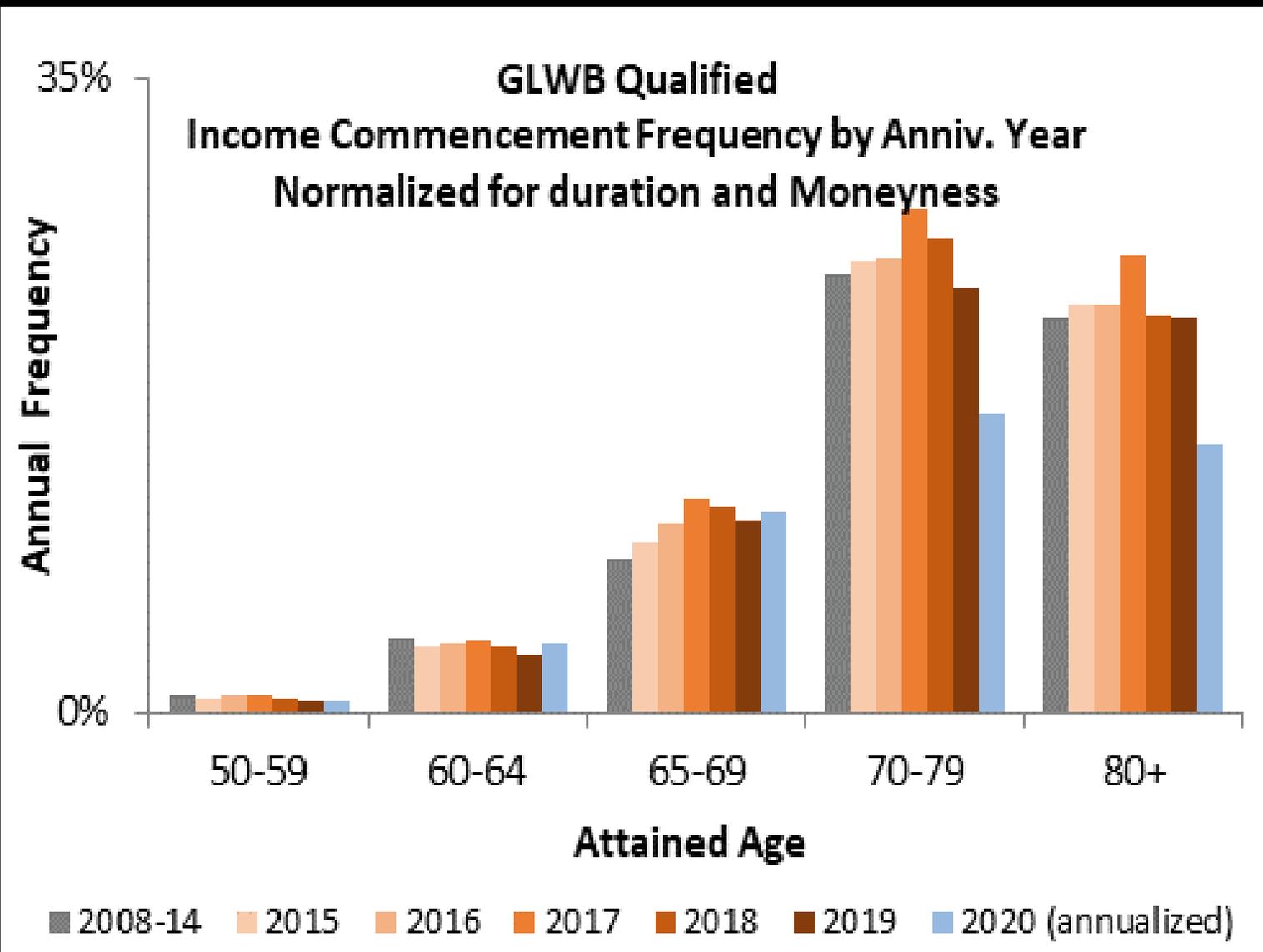
GLWB income commencement frequency Normalized for age & tax

0%



ITM 100+% ITM 50-100% ITM 25-50% ITM 5-25% ATM OTM 5-25% OTM 25+%

- Earlier (Dur 3-10)
- 2019 (Dur 3-10)
- 2020 (Dur 3-10)
- Earlier (Dur 11+)
- 2019 (Dur 11+)
- 2020 (Dur 11+)



VA

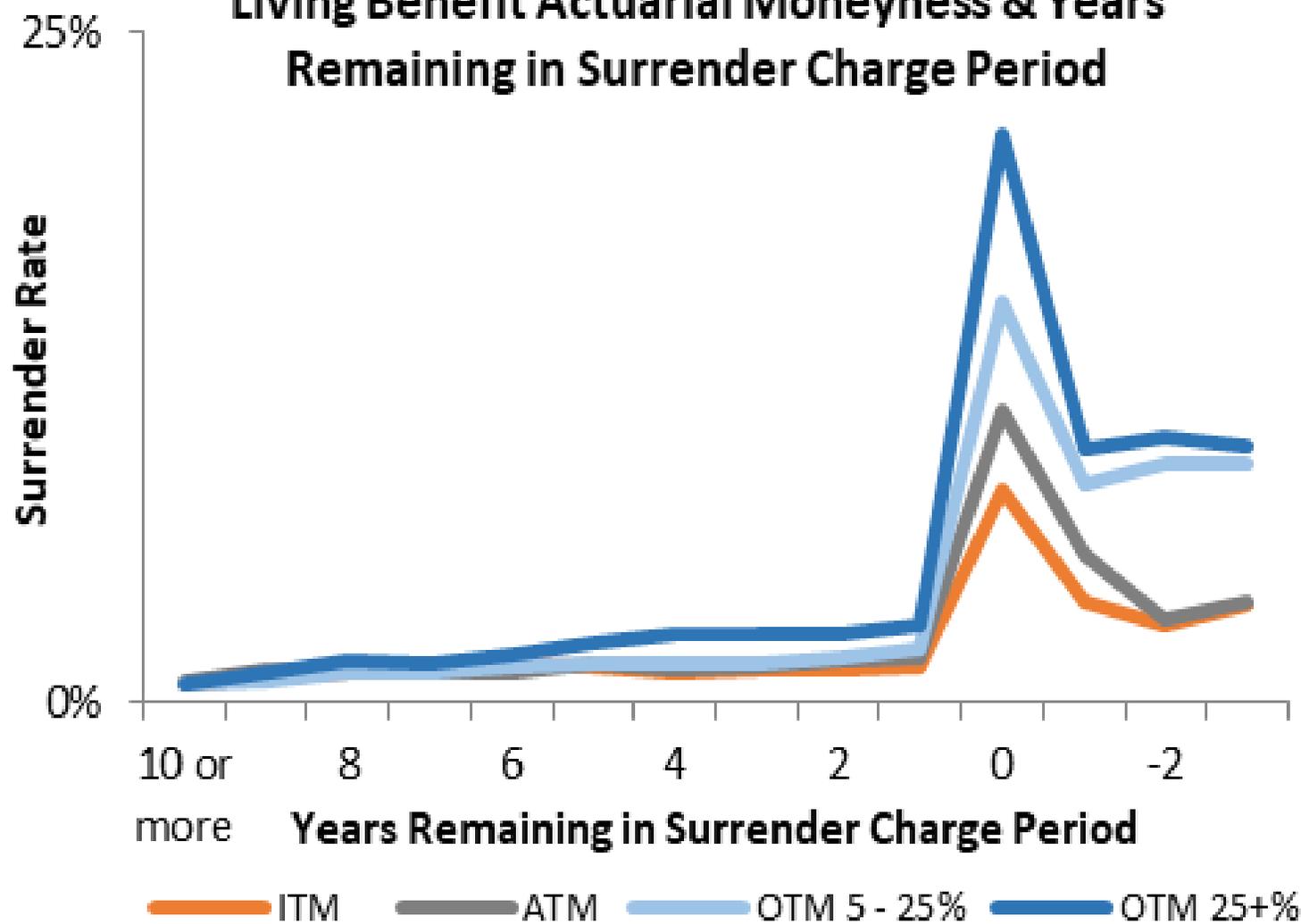
Lower surrenders for seasoned contracts

Lower commencement rates for lifetime income benefits

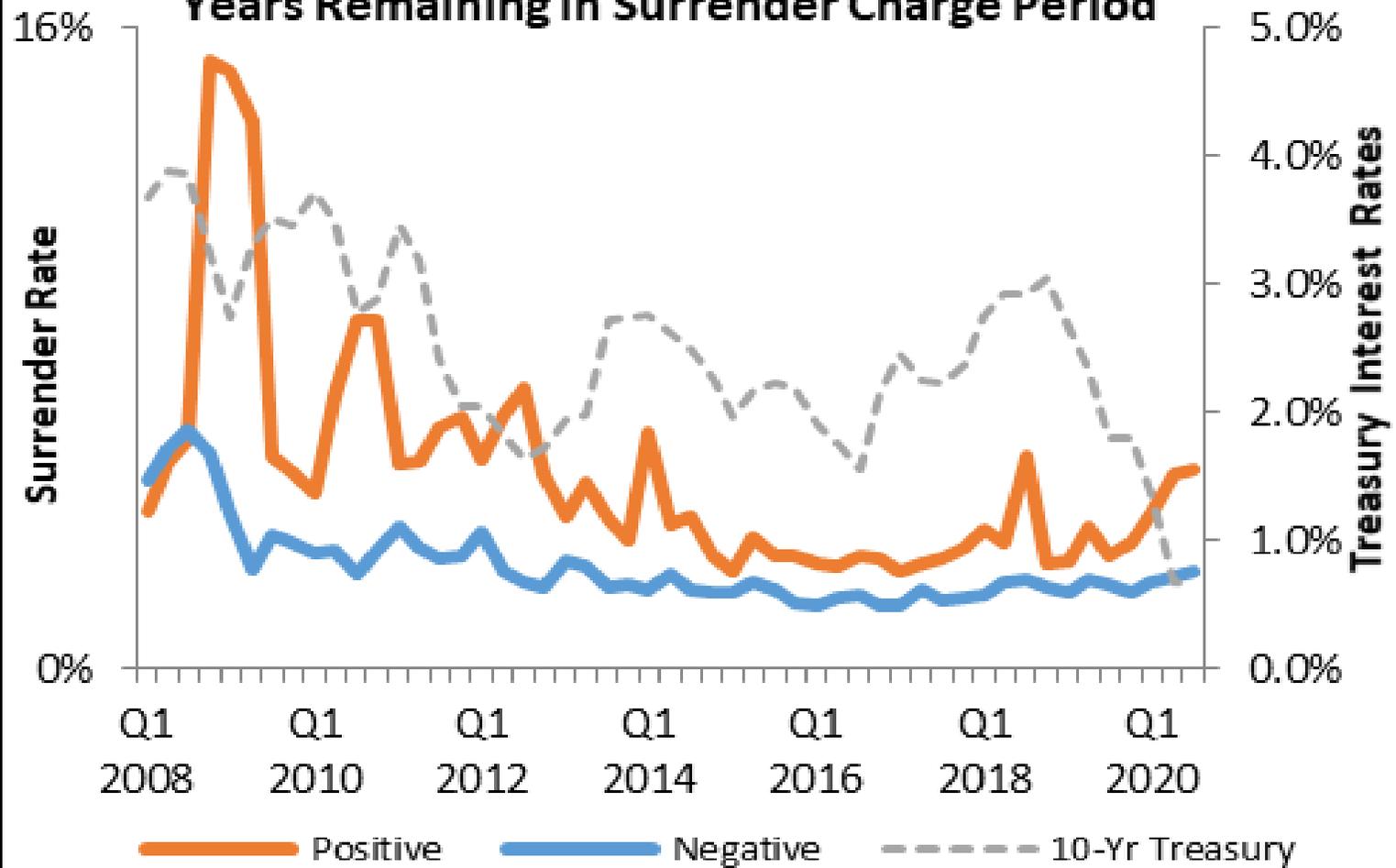
CARES Act RMD waiver

Fixed Indexed Annuities

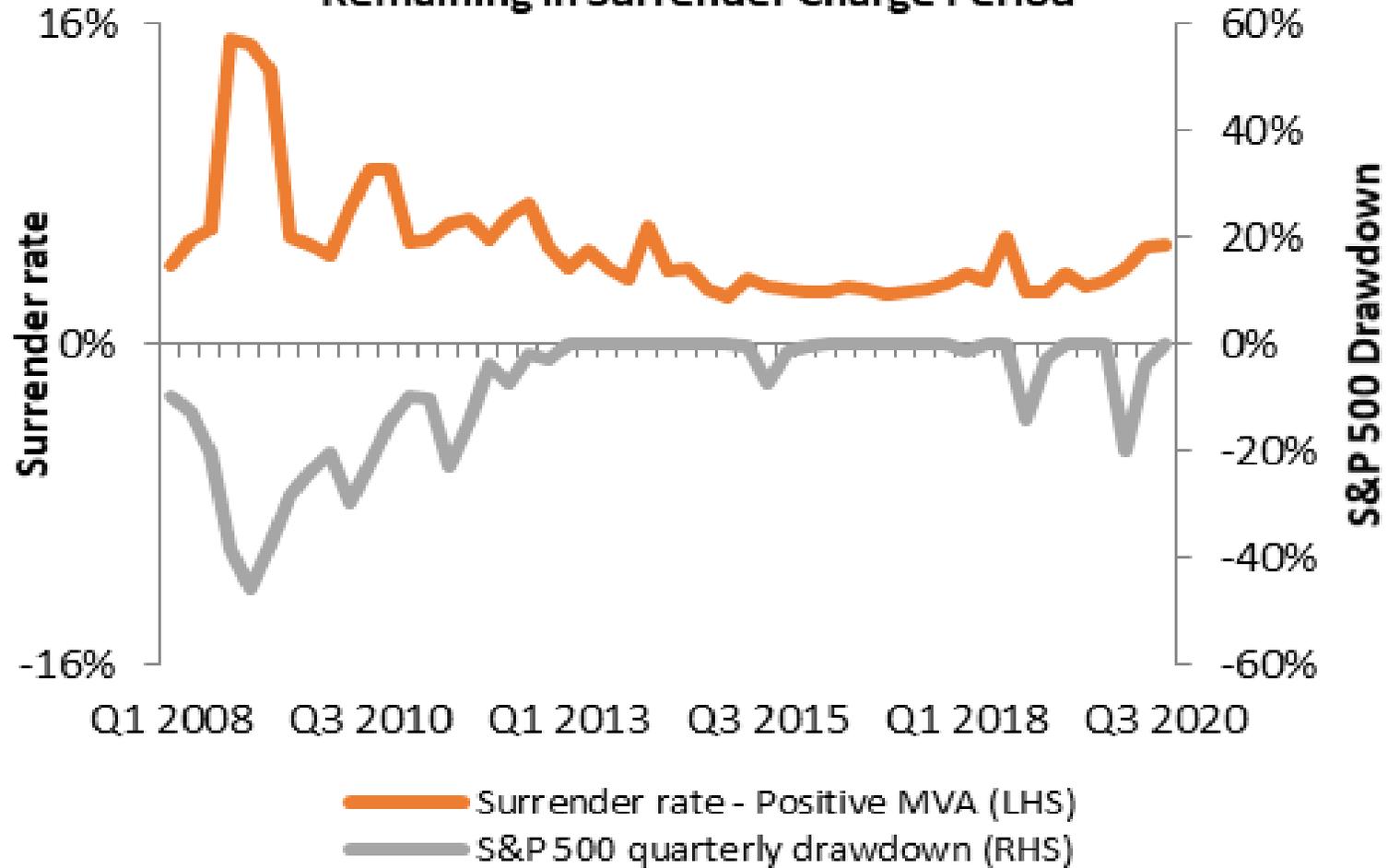
Living Benefit Actuarial Moneyiness & Years Remaining in Surrender Charge Period



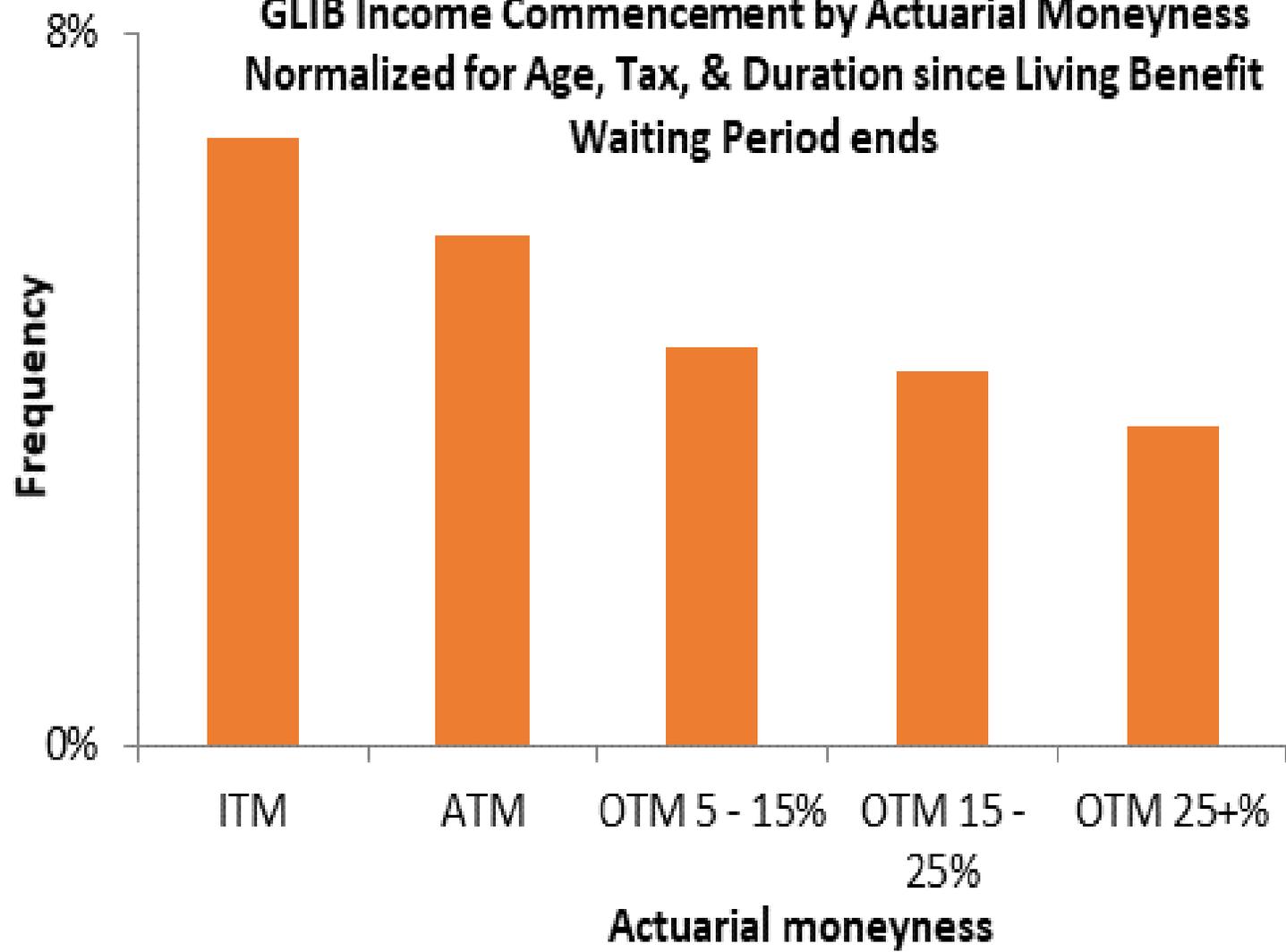
Calendar Quarter for Products with MVA Normalized for GLIB presence/utilization and Years Remaining in Surrender Charge Period



Positive MVA Surrenders vs. Equity Market Drawdown Normalized for GLIB presence/utilization and Years Remaining in Surrender Charge Period



**GLIB Income Commencement by Actuarial Moneyiness
Normalized for Age, Tax, & Duration since Living Benefit
Waiting Period ends**



Lower surrenders, with and without lifetime income benefits

Higher surrenders for contracts with positive MVA

Similar income commencement rates

Mortality



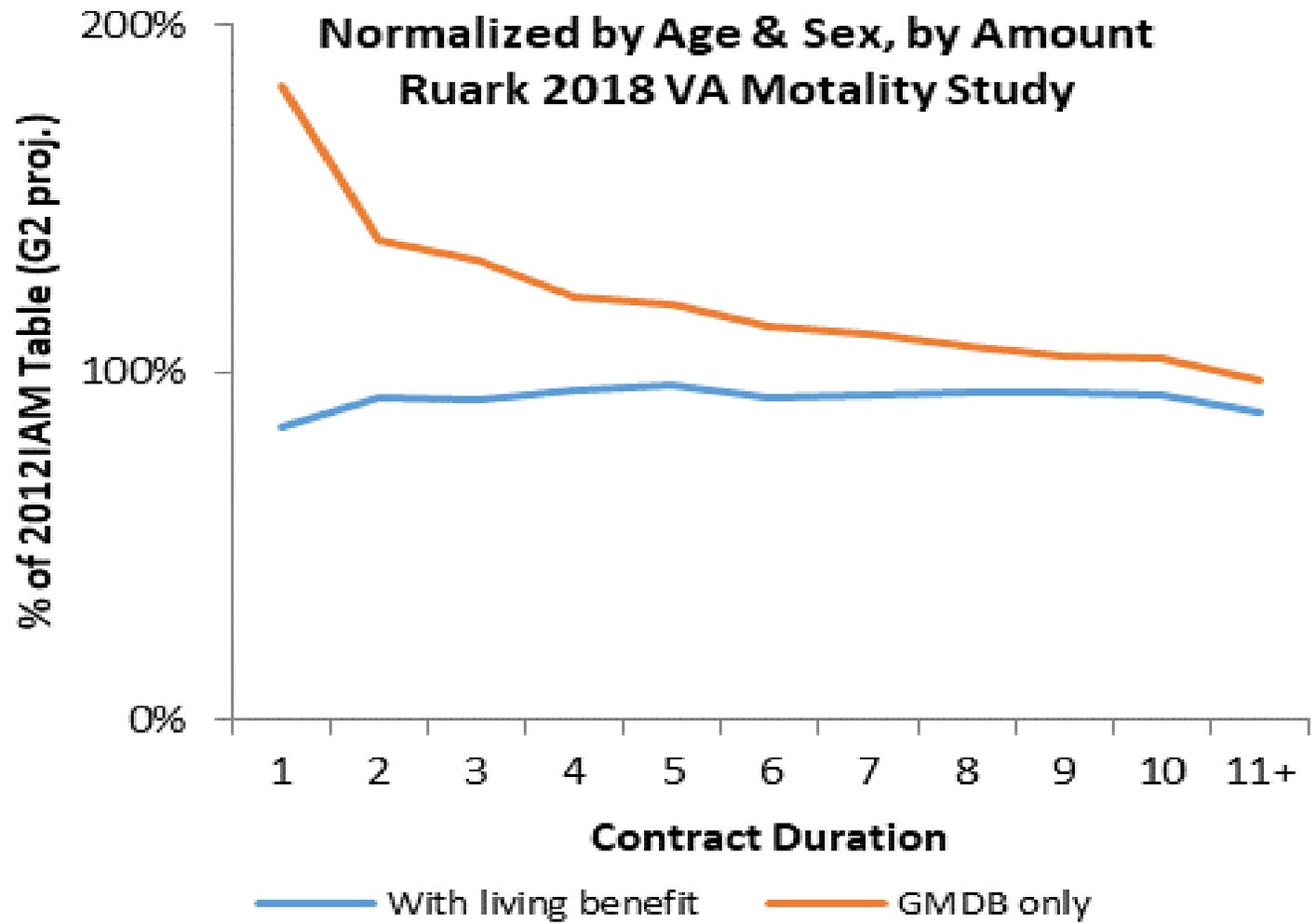
Population

Group Life

Individual Life

Annuities

**VA Mortality by Living Benefit Presence
Normalized by Age & Sex, by Amount
Ruark 2018 VA Mortality Study**



Long-term Impact?

Population context

Selection effects by benefit type

Short-term shock or
long-term impact?

Looking Forward

Reduce Risk

About 70% of the market and
over \$1 trillion account value

What can't you see
in your own data?

Customized predictive analytics
using credibility theory

Discussion