

Behavioral Analytics Advisory Council

Preparing for LDTI

July 22, 2021

2:00 – 3:00pm Eastern

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Disclosures

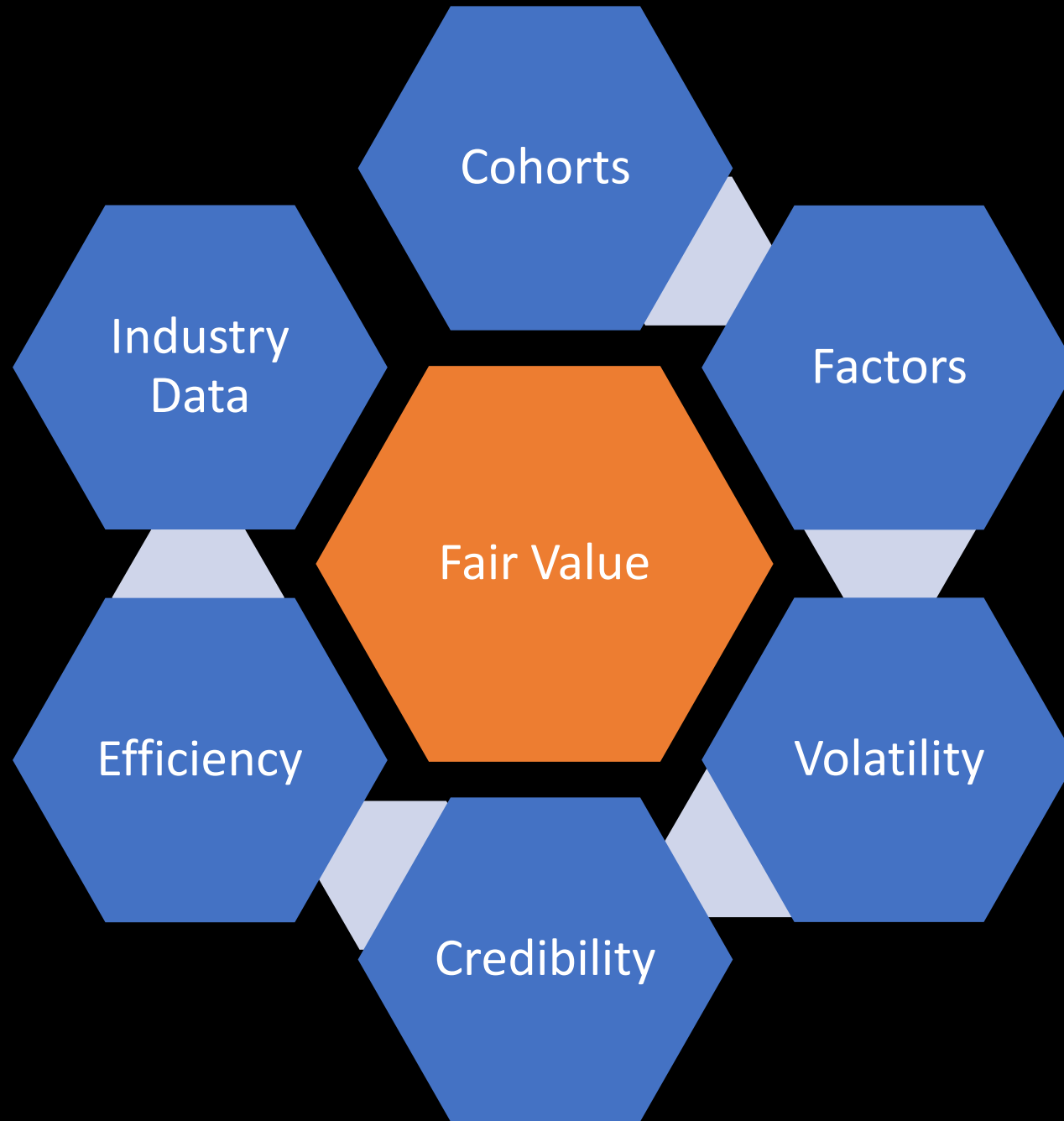
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We aim to be the platform
and industry benchmark
for principles-based
insurance data analytics
and risk management



Preparing for LDTI



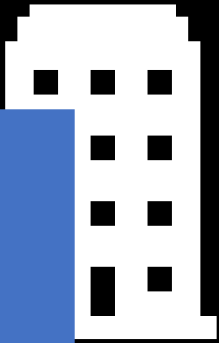


VA
thru Q4 2020

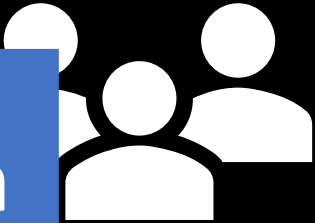
'08



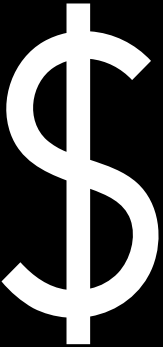
21



15m



768b





+64%

Deep-in-the-money



3X

Pre-income years 11+

Surrenders

```
graph LR; A[Market volatility and social distancing] --> B[2% lower "ultimate" surrender rates]; B --> C[Lower annuity sales];
```

Market volatility
and social
distancing

2% lower
“ultimate”
surrender rates

Lower
annuity sales

GLWB income commencement

Social
distancing and
CARES Act

RMDs
1/3 lower



2X

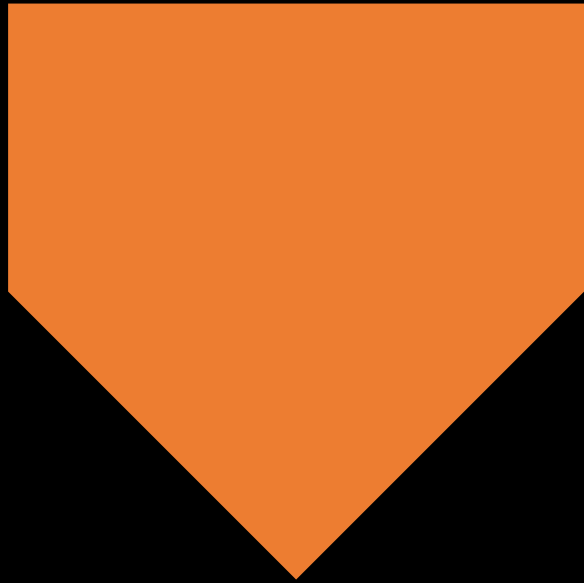
After deferral incentives



6X

After deferral incentives
and moneyness

GMIB annuitizations



Downward trend for
Hybrid GMIB

Advisor influence

A blue graphic shaped like a house, consisting of a triangular roof and a rectangular base. The text '+34%' is centered within the house shape.

+34%

Higher surrenders
when relationship
is weaker

FIA

thru Q3 2020

Mortality

incl COVID impact

2021

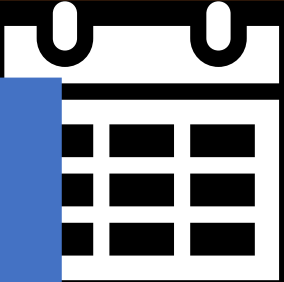
VA

thru Q4 2020

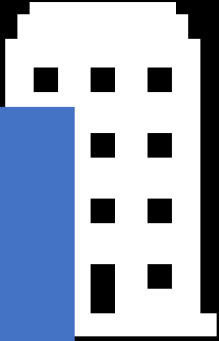
FIA

thru Q3 2020

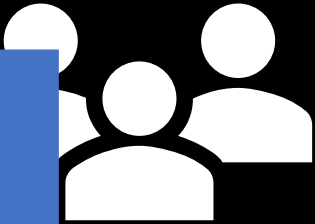
'07



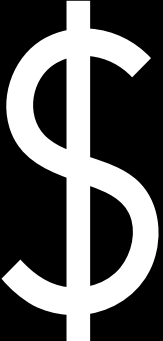
16



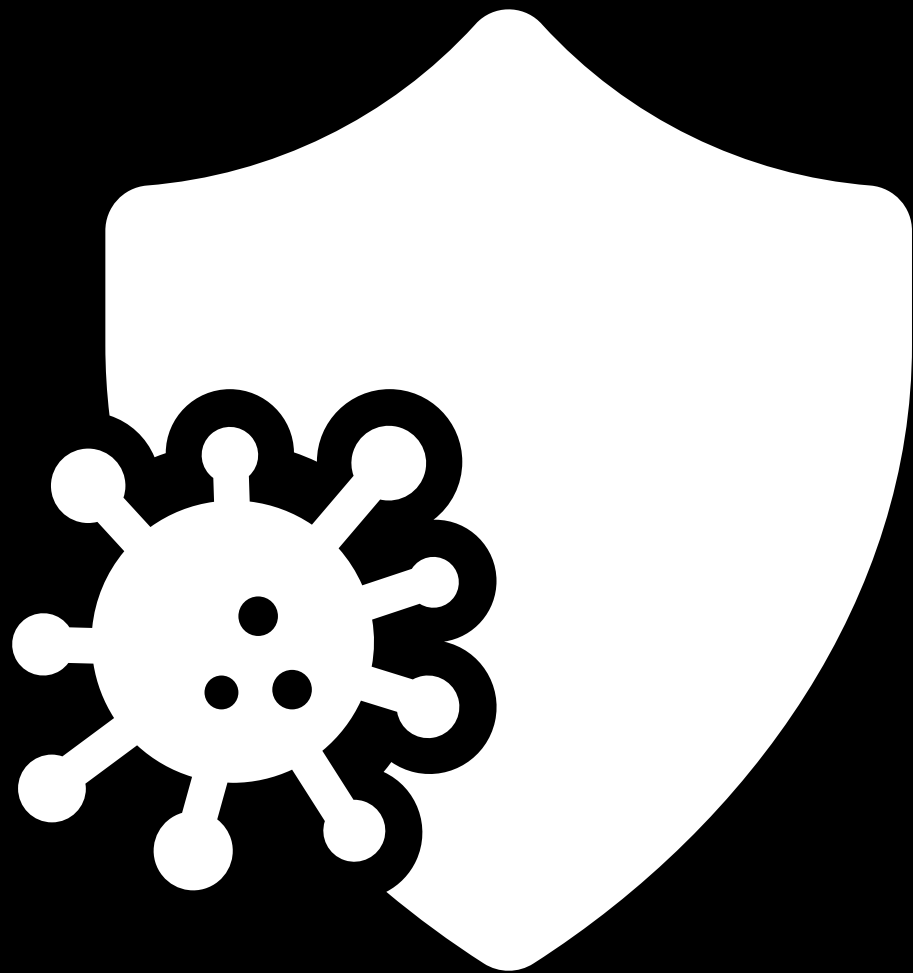
4m



264b



FIA highlights



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

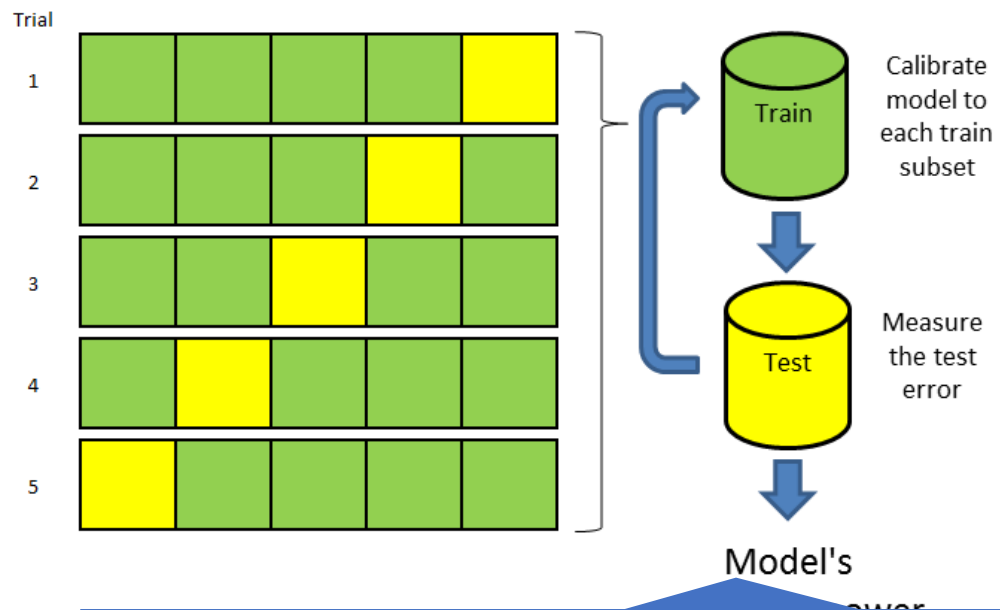
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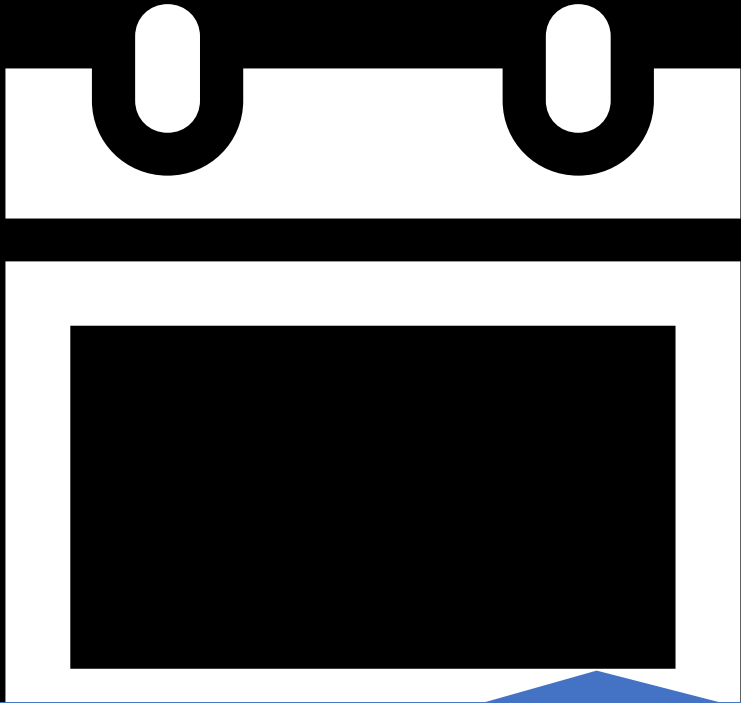
Make your business case using KPIs

5-Fold Cross Validation

Measures the bias-variance trade-off



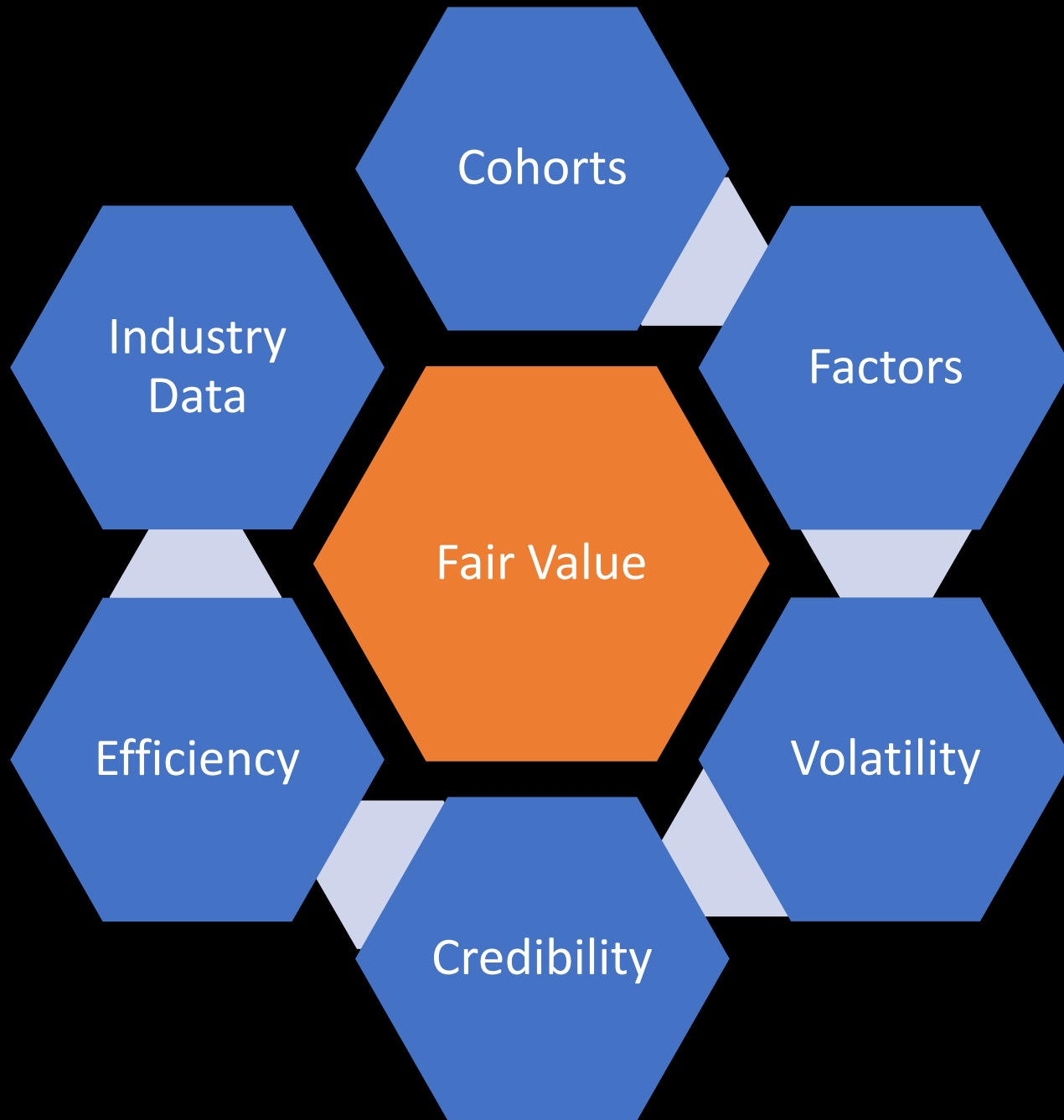
Out of sample
A/E = 99.8 to 100.2%



Out of time
2020 A/E = 95%



When once in a
century happens
twice in 13 years



Discussion