

# Pandemic Rewind: Risk Management and Scenario Modeling Learnings

Session 5A: October 26, 2021

Moderator:

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Presenters:

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- **Do not** discuss prices for services or products or anything else that might affect prices
- **Do not** discuss what you or other entities plan to do in a particular geographic or product markets or with particular customers.
- **Do not** speak on behalf of the SOA or any of its committees unless specifically authorized to do so.
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- **Do** alert SOA staff and/or legal counsel to any concerning discussions
- **Do** consult with legal counsel before raising any matter or making a statement that may involve competitively sensitive information.

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# Agenda

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01

CRO discussions

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Action



Evolution



Lessons learned

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02

Case study: Insurer perspective

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03

Q&A

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# 01 CRO DISCUSSIONS

Chris Murphy, ASA  
Morgan Poropatic

# Interview format

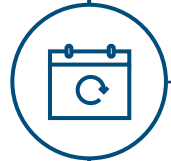


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## PARTICIPANTS

Chief Risk Officers (CROs) from leading insurers

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## FORMAT

Guided 30-minute conversational interviews

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## RESULTS

Summarized results from CRO conversations

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# Participating companies

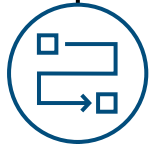
 <p><b>Brighthouse</b> FINANCIAL® Build for what's ahead™</p>	 <p><b>EQUITABLE</b></p>	 <p><b>F&amp;G</b> ANNUITIES &amp; LIFE</p>	 <p><b>MetLife</b></p>	 <p><b>ONEAMERICA</b>®</p>
 <p><b>TheStandard</b>®</p>	 <p><b>TRANSAMERICA</b>®</p>	 <p><b>unum</b>®</p>	Global reinsurer	Top 10 direct writer

# Guiding questions



## Action: Oversight role and responsibilities of ERM during the pandemic

- What were your initial thoughts when the pandemic hit? Did you feel you were prepared? How did this evolve over time?
- How did the ERM team step into action? What were key activities—both immediate and as time passed?



## Evolution: Impact to ERM frameworks

- How has the pandemic impacted your company's risk management practices?
- How is ERM valued now? Have you seen the role change in your company?



## Lessons learned

- What held up well in your framework? What do you think was missing? What is being done differently?
- What continues to keep you up at night?




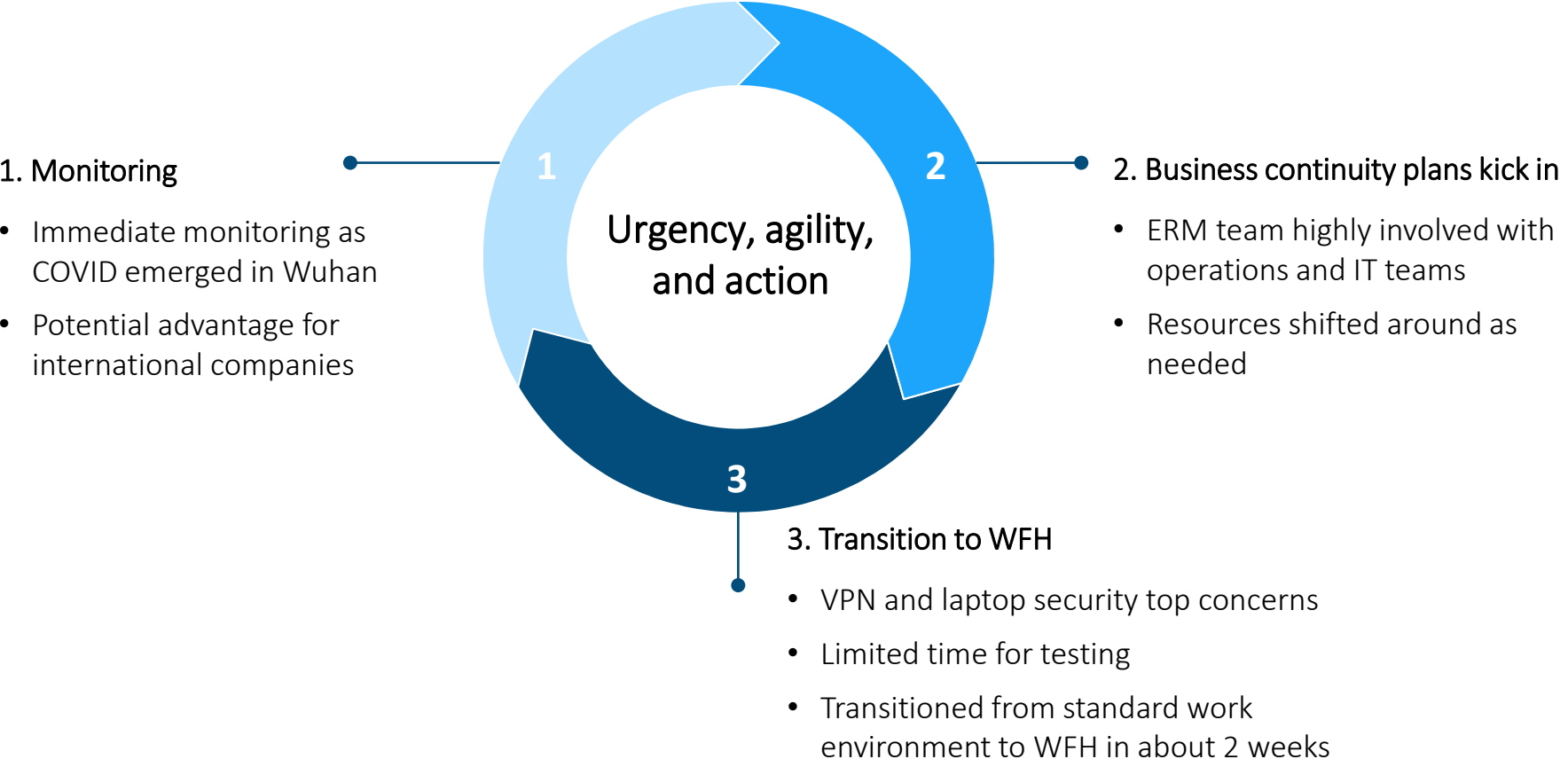
# **ACTION**

OVERSIGHT ROLE AND RESPONSIBILITIES OF ERM DURING THE PANDEMIC



# Keeping the lights on

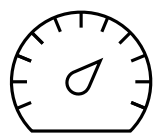
 *“Operational risk is not to be underestimated”*





# Communication, communication, communication

Key principles applied



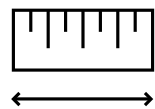
### Speed

- Active
- Early



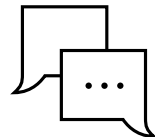
### Integrity

- Factual
- Transparent




### Consistency

- Coordinated
- Continuous





### Comprehensibility

- Brief
- Uncomplicated

 *“In March, we pulled a taskforce together including the ERM VP, executive team and some of their direct reports including the IT chief, ops people, etc.”*

 *“Outside of standard management meetings, we had a separate financial crisis team meet on economic impacts...all the key financial players”*

 *“The message to everyone was to stay calm. People get terrified when they no longer have control over their situations”*

 *“The ERM team worked with various lines of business to determine key risks; connectivity was deliberately strengthened”*



*You can't prepare when you are in a crisis;  
the work needs to be done beforehand*

*Being more proactive is the 'ultimate  
nirvana' for a CRO; processes should be in  
place to keep the company from getting  
into trouble*

*Work should be done before the crisis; if  
you are scrambling during a crisis, you  
did something wrong*





# Preparedness **before** the pandemic hit

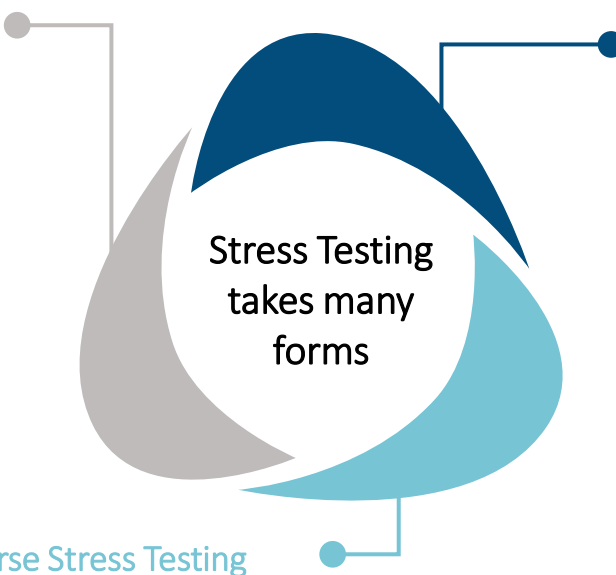
Although business continuity plans were in place, the pandemic tested WFH capabilities and operations, more significantly in certain geographical areas

Key focus area	Preparedness
<b>Mortality</b>	
Model pandemic mortality	
Reinsurance	
Balance mortality risk with longevity risk	
<b>Economic</b>	
Manage credit risk exposure; hedge	
Develop an ALM playbook	
<b>Operational / Other</b>	
Develop business continuity plans (BCP)	
Expand work from home (WFH) capabilities	
Diversify operations geographically	
Get involved in product development	

# Stress testing

## Sensitivity Testing

- Testing of single risk driver
- Individual risk exposure assessment
- Often calibrated to specific probability or confidence level
- Example: 1-in-20 mortality event



## Scenario Testing

- Multiple risk factor assessment
- Plausible scenario incorporating multiple assumptions
- Historical and hypothetical scenarios
- Example: Pandemic impacts (mortality, economic, operational)

## Reverse Stress Testing

- Determination of sensitivity or scenario (risk event) that could lead to a pre-defined outcome (\$X million impact on earnings or capital)
- Example: Description of catastrophic event that would breach specific capital levels (350% RBC, 200% RBC)

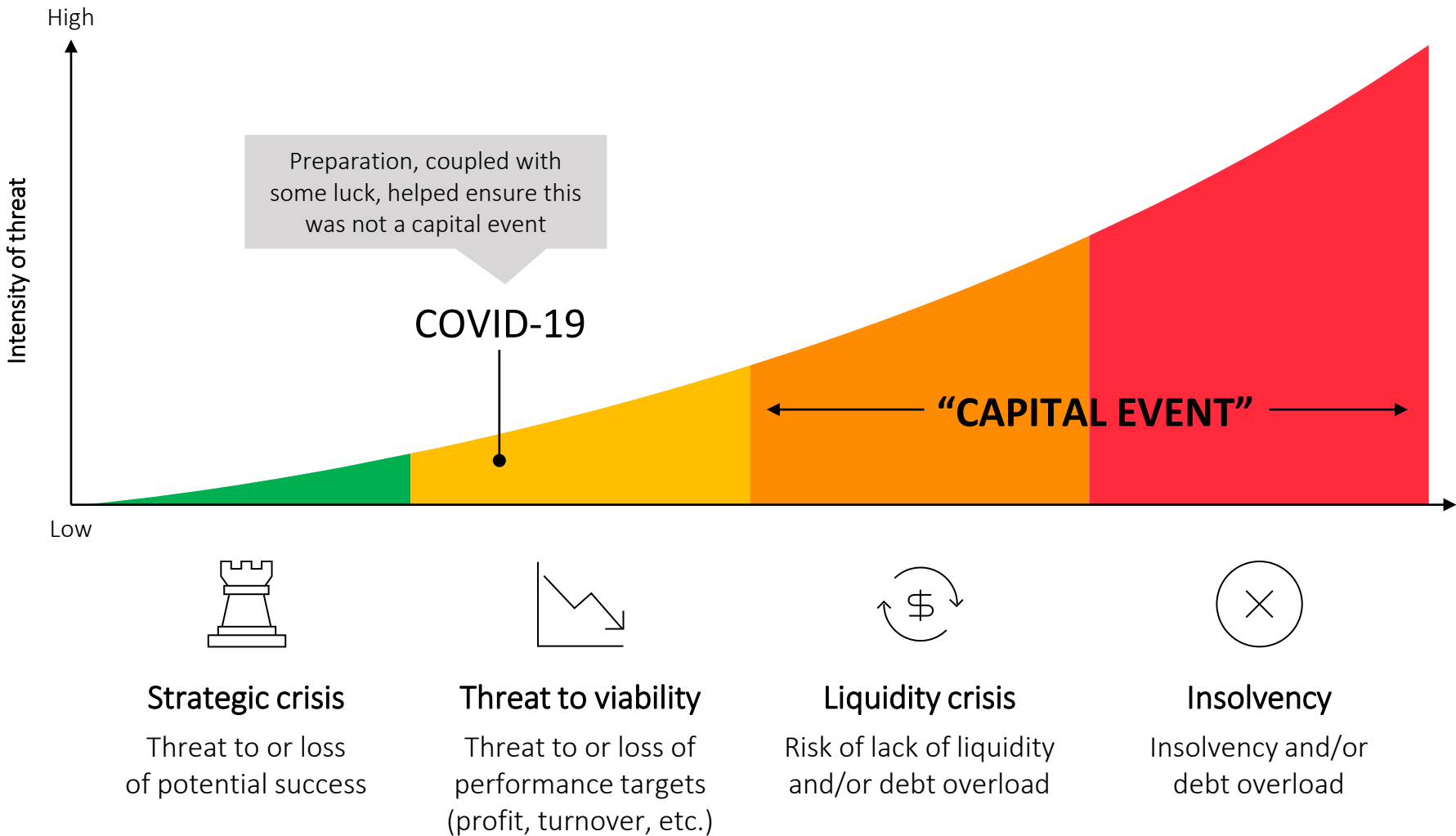


*“We’re not in business of avoiding losing a billion dollars, we’re in business of losing a billion dollars and being ok”*

*“Even under 1918 Flu levels, this is something we would have survived”*



# This crisis was not a “capital event”





# Economic actions

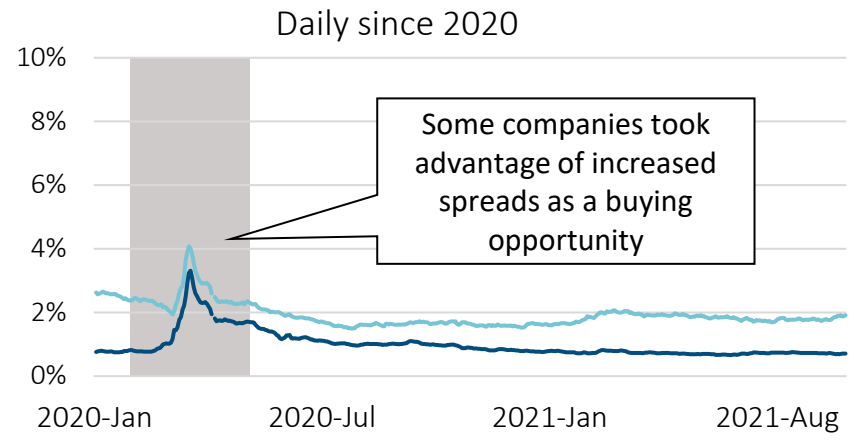
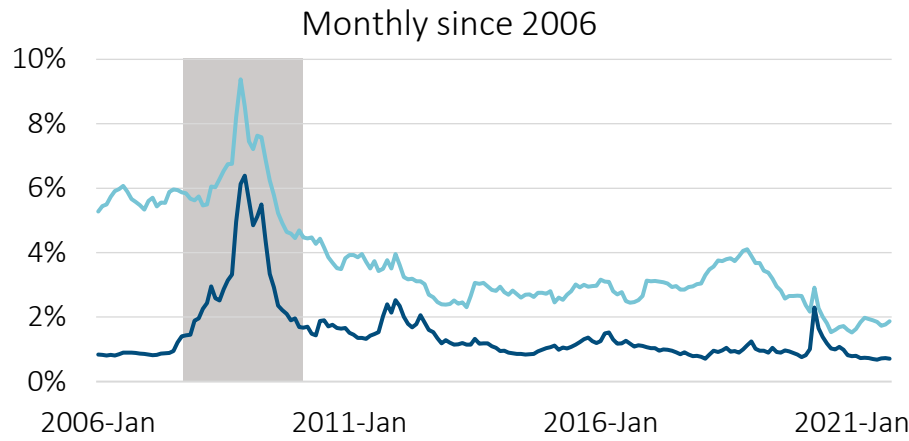
“Once things actually start happening, you don’t have a lot of flexibility for strategy on market and reinsurance risk”

“We were well hedged” and “We were better hedged than we thought”

“Ended up being an opportunity to buy cheap”

## Single A corporate bonds

Effective yield and option adjusted spread



— Corporate Single A Yield  
 — Corporate Single A OAS

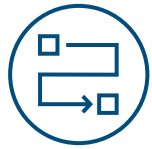




# Then what?

*“Over the summer, we moved from **mobilization** to **stabilization**”*

# EVOLUTION



IMPACT TO ERM

“

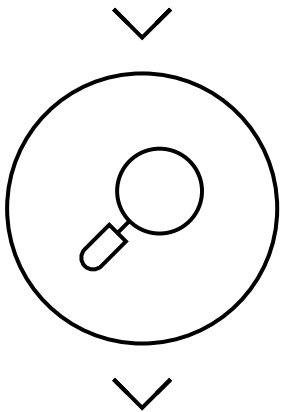
*COVID allowed our ERM team to shine and step into a leadership role; not just at the top, but throughout the organization*

”



# Performance of ERM frameworks

Frameworks held up well and performed better than expected



Pain points			
01	02	03	04
Role confusion	Decision making	Burden on employees	Maintenance of business as usual

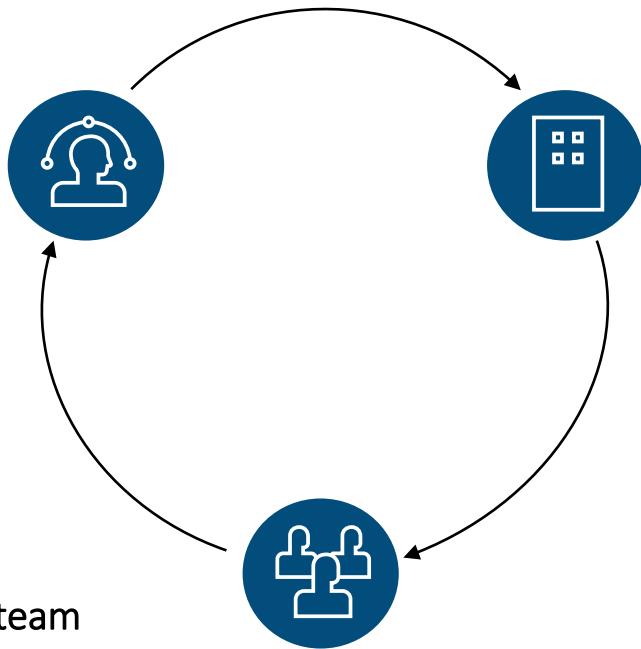


# ERM team structure

What we heard: ERM teams are integrated into their organizations

### CROs

- Monitor risks
- Be proactive
- Raise potential issues



### Organization leadership

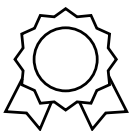
- Aid in decision making
- Provide centralized communication

### ERM team

- Provide support
- Serve as leaders throughout the organization

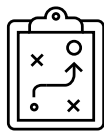


# Value of ERM stood out during the pandemic



## Reaffirmed value

- ERM was already considered valuable
- Reaffirmed through pandemic



## Preparedness

- Relative to prior crisis, companies had more liquid capital
- No companies feared capital events
- Companies were regularly testing pandemic scenarios



## Credibility

- Worst case scenarios can actually happen
- Reinforced value of scenario analysis

# LESSONS LEARNED



MOVING FORWARD



# What is keeping you up at night?

Third party risks

Cybersecurity

Inflation

Hybrid work environment

Changing customer expectations

Investment strategies

Future excess mortality

Global COVID impact



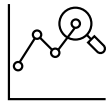


# SOA survey of emerging risks

Top 5 emerging risks

	2017	2018	2019	2020
1	Cyber/networks	Cyber/networks	Climate change	Climate change
2	Terrorism	Climate change	Cyber/networks	Cyber/networks
3	Disruptive technology	Disruptive technology	Disruptive technology	<b>Pandemics/infectious disease</b>
4	Regional instability	Demographic shift	Demographic shift	Disruptive technology
5	Asset price collapse	Financial volatility	Financial volatility	Financial volatility

# Key considerations for the next crisis



## Stress Testing

- Scenario testing
- Reverse stress testing
- Relying on experts in other fields



## Communication plan

- Clear and consistent communication from leadership
- Communication among leadership on responsibilities and decision-making processes



## ALM Playbook

- Clear steps to take in a financial crisis
- Reduces panic
- Allows organizations to capitalize on opportunistic pricing

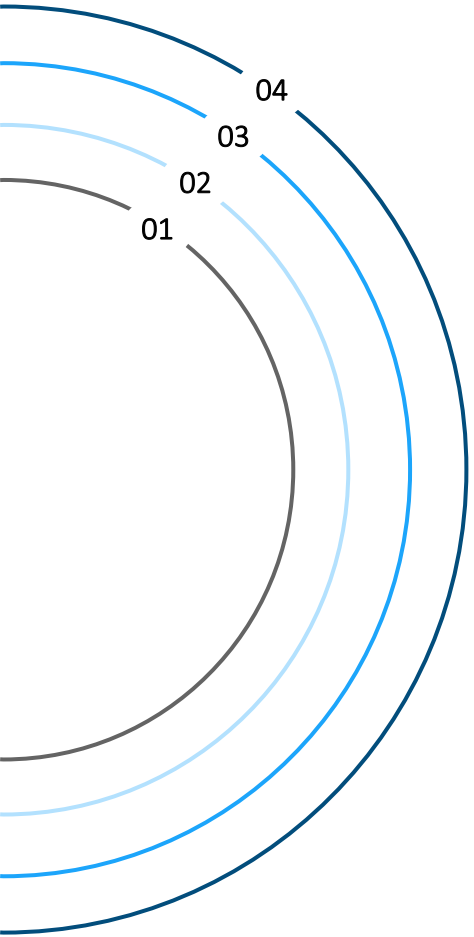


## Geographical Risk

- Risks vary by geographical region
- Early hot spots
- International regulations



# Key learnings



- 01** Prepare before  
Little can be done once a crisis begins
- 02** Focus on people and business continuity  
First course of action
- 03** Communicate plan  
Early and often
- 04** Analyze impact  
Understand the implications for your business

# 02 Case study: Insurer perspective

David Brentlinger, FSA, MAAA, CERA

# OneAmerica Financial Partners, Inc.

- Mutual insurance holding company
- Sell retirement products and services, individual life insurance and annuities, asset-based long-term care products, and employee benefits products
- Licensed in 49 states + DC (i.e., not NY and no international business)
- Just under \$55B of assets as of 12/31/20
- Our home office is in downtown Indianapolis, IN

# COVID was a Contagion Event

- Associate well being
- Business continuity
- Spike in mortality and morbidity
- Drop in interest rates
- Equity market correction
- Credit migration
- Impact on sales

# Models were Used to Support Decision Making

- Report expected impact on liquidity, capital, required capital and earnings under various scenarios
- Understand range and drivers of future excess mortality and morbidity
- Identify opportunities
- Provide insights into secondary risks such as cyber-security and third-party risk

# Past Modeling Lessons Confirmed

- Follow Code of Professional Conduct and ASOPs
- Work supporting ORSA is a valuable, practical tool
- Reporting tools / models need to be automated and credible to maximize decision-making time
- Understand your boundaries when creating a new model
- Understand the needs of your stakeholders; communication is key
- “Don’t waste a crisis”: use a crisis to support acquiring needed resources to booster modeling function



# New Modeling Lessons Learned

- The realization of the pandemic challenged the simplified assumptions underlying our existing pandemic mortality scenarios
- Balance where you get your information – trusted published sources and your network of subject matter experts
- Several senior-level stakeholders had a desire to play out their own scenarios in the models
- Need to consider the implications of government decision-making used in stabilizing the economy during a crisis

# Modeling Considerations for Other Emerging Risks

- The modeling lessons learned from the pandemic play into other emerging key risks such as cyber
- Rely on SMEs outside of your area of expertise (e.g., assumption setting relative to risk mitigants in place)
- Understand the value of approximating a range of losses given that a loss occurs
- Call out key assumptions; seek input and collaboration if necessary
- Make sure model is explainable
- Communication is key; explain rationale for key decisions

# 03 Q&A

Fill Out the  
Evaluation and  
Claim Your CPD  
Credits

