

2019 **LIFE &  
ANNUITY**

SYMPOSIUM

May 20–21 • Tampa, FL



## Session 33: Evolution of Model Risk Management

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# Evolution of Model Risk Management

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**David Wicklund, FSA, MAAA, CFA**

**Blake Hill, FSA, FCIA**

May 21, 2019



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- **Do** consult with legal counsel before raising any matter or making a statement that may involve competitively sensitive information.

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# Agenda

- Introductions
- Get to know MRM from audience
- What is MRM
- MRM landscape
- Future of MRM

# Introductions – Mark Nowakowski



Mark Nowakowski  
Principal, KPMG LLP

- Mark is a Principal in KPMG's Atlanta office, with over 20 years of experience in financial services. Mark's focus is on financial modeling, derivatives, and quantitative analysis in capital markets and banking, with extensive experience in modeling derivatives, mortgage products, asset-liability management, and real estate risk. Mark has worked with numerous financial institutions on model risk governance issues and model validation, in particular since the issuance of OCC 2011-12 / Fed SR 11-7 (Supervisory Guidance on Model Risk Management).

# Introductions – David Wicklund



David Wicklund  
Senior Actuarial Advisor, Ernst & Young LLP

- David Wicklund is a Senior Actuarial Advisor in Ernst & Young's Insurance and Actuarial Advisory Services practice. David has 15 years of life insurance industry experience, including the past 11 at EY. David's experience includes risk management; financial reporting; transformation; financial planning & analysis; and mergers and acquisitions. He has advised many companies with the establishment and execution of model risk management.

# Introductions – Blake Hill



Blake Hill, FSA, FCIA  
VP Life Insurance, dacadoo

- Blake Hill, Vice President of Insurance, dacadoo: Blake is leading insurers into the digital age with dacadoo! Blake has developed and launched insurance, savings, investment, and group health products, and through his leadership launching the Vitality program in Canada he implemented partner integrations and the use of advanced analytics in marketing and customer engagement. Blake is now supporting insurance companies globally as they transformation into customer centric and digitally enabled businesses using the dacadoo Health Risk Quantification and dacadoo Digital Health Engagement platform.



# Interactive Discussion With Audience Polling



# Audience Polling & Questions

- <https://las.cnf.io>
- Session 33

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**Poll: Do you know how to use the polling software?**

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# Poll: Primary function

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# Poll: Employer Type

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# **Poll: Subject to Model Risk Management - Employer Type**

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# **Poll: Risk Management, first line model owner, observer**

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**Poll: Have you gone through the MRM  
process**



# What is Model Risk Management



# What is MRM

- More than peer reviews, describe model validation, enterprise-wide model risk governance
  - What is “model risk”?
  - What’s the difference between “Model Risk Management” and “Model Validation”?
  - What is in scope?
- Regulatory requirements and industry practice
- Large versus small company perspective
- How is the risk level determined, how is magnitude determined?

# MRM Landscape



# Where are we now

- Models contributed to 2008-9 Financial Crisis (AIG/securitization, mortgage markets & home prices (correlation assumptions), JPMC & CDS)
- Any specific approach or examples that you can share which worked well for a particular company in managing their model risk?
  - Any where MRM caught before an event?
  - Misses? Model risk events.
- How would you describe a fully optimised model risk management framework
  - What kind of characteristics would be required for a best in class

# Comparison across the landscape

- Can you share any material differences in how life vs. P&C vs. pension companies implemented their model risk management framework and the relative state of maturity?
- Can we learn anything from the banking industry related to model risk management?
- Can we learn anything from Technology, Oil & Gas, Aerospace, etc?

# The balance

- How do you make sure get consistent reviews and quality; different people doing reviews, different departments
- How do you flex up or down, budget constraints?
- Operating models to achieve optimal outcome
  - Independent review or model owner owning review process
- Technology enablement to support MRM
  
- How to do determine where the most value is of an MRM framework?  
Without huge budgets to deliver

# MRM Future



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# **Poll: MRM & Data Analytics**



# What is next

- As data analytics, predictive modelling, and ML/AI (Machine Learning & Artificial Intelligence) are used more widely within insurance and reinsurance companies, how should the model risk management framework evolve to provide effective oversight?
- What about models that empower customer services, customer facing tools, underwriting,

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# Social Q&A



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