



# THE CHALLENGE TO INSURANCE AND PENSIONS FROM SUSTAINABILITY RISKS

Dr Louise Pryor, President-elect, Institute and Faculty of Actuaries

Webinar

Thursday, 18 March 2021, 16:00 GMT

# A Word From Today's Chairman



**Professor Michael Mainelli**

Executive Chairman

Z/Yen Group

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# Today's Agenda



- 16:00 – 16:05 Chairman's Introduction
- 16:05 – 16:25 Keynote Address
- 16:25 – 16:45 Questions & Answers

# Today's Speakers



**Dr Louise Pryor**

President-elect

Institute and Faculty of Actuaries

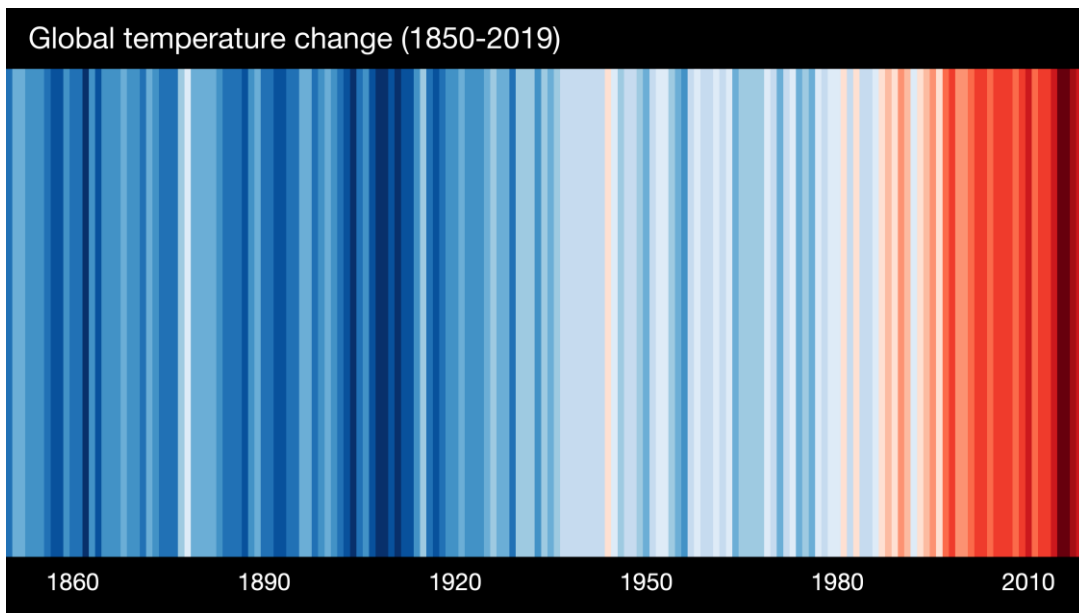
# The Challenge to Insurance and Pensions from Sustainability Risks

Louise Pryor

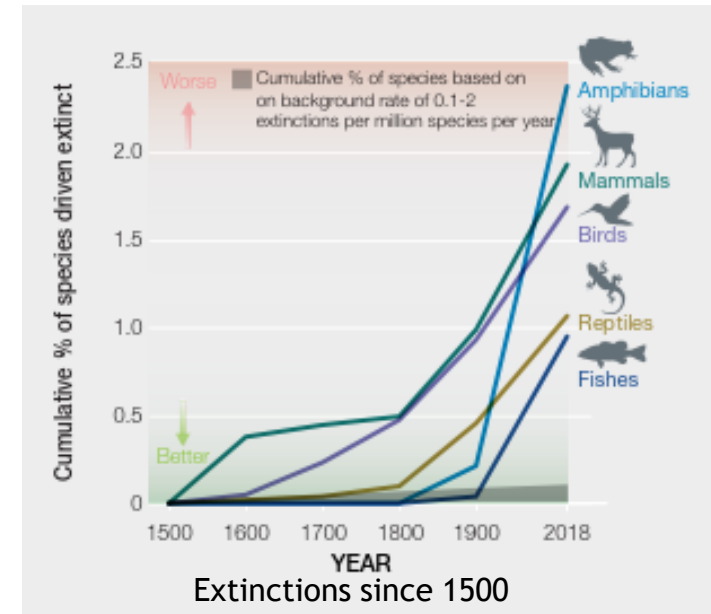


# Certainties

## ► Climate change and biodiversity loss



Source: <https://showyourstripes.info>



Source: IPBES The Global assessment Report on Biodiversity and Ecosystem Services Summary for Policymakers <https://ipbes.net/global-assessment>



# Poll

- ▶ How much higher than the baseline rate are current extinction rates?
  - a) 1 - 10
  - b) 10 - 100
  - c) 100 - 1000





# Dasgupta review

- ▶ Current extinction rates 100 - 1000 times higher than baseline rates
- ▶ Need 1.6 Earths to maintain current living standards
- ▶ Around US\$4 - 6 trillion per year of subsidies that damage Nature

Source: <https://www.gov.uk/government/publications/final-report-the-economics-of-biodiversity-the-dasgupta-review>



# Risks

- ▶ Potential consequences include
  - ▶ Severe weather events, agricultural and health effects
  - ▶ Changing regulations
  - ▶ Starvation, mass migration, civil unrest
  - ▶ Changes to consumer demand, business models, financial system, economy



# Challenges

- ▶ Risk management
- ▶ Incentivising and supporting
- ▶ Serving end users
- ▶ Investment, insurance, pensions
  - ▶ What about the regulators?

*The financial sector is an enormously powerful and effective force, and can be a force for good.* Mark Carney



# Risk management

- ▶ Sustainability risks are different!
- ▶ How to approach them



# Why sustainability risks are different

	Repeatable risks	Sustainability
Frequency	Happen again: probability distribution is possible	Chronic and long lasting: no probability distribution
Impact	Data can give probability distribution	Significant uncertainty
Extent of impacts	Contained	Systemic, wide ranging, fundamental changes
Recovery	Restoration often possible	Nonlinearity and tipping points mean no going back
Cost	Discounting, probabilities	???

# Uncertainty

- ▶ Knightian, radical, deep....
  - ▶ No data, no probability distributions!
  - ▶ Unquantifiable on many timescales
  - ▶ Non-stationary
- ▶ Intrinsic limits to predictability in complex systems
  - ▶ System subject to dynamic change



# Mitigation and adaptation

## Mitigation

- Avoid the unmanageable
- Our impacts on the environment
- Reduce emissions / biodiversity loss

## Adaptation

- Manage the unavoidable
- Environment's impacts on us
- Handle changing climate / biodiversity



# Poll

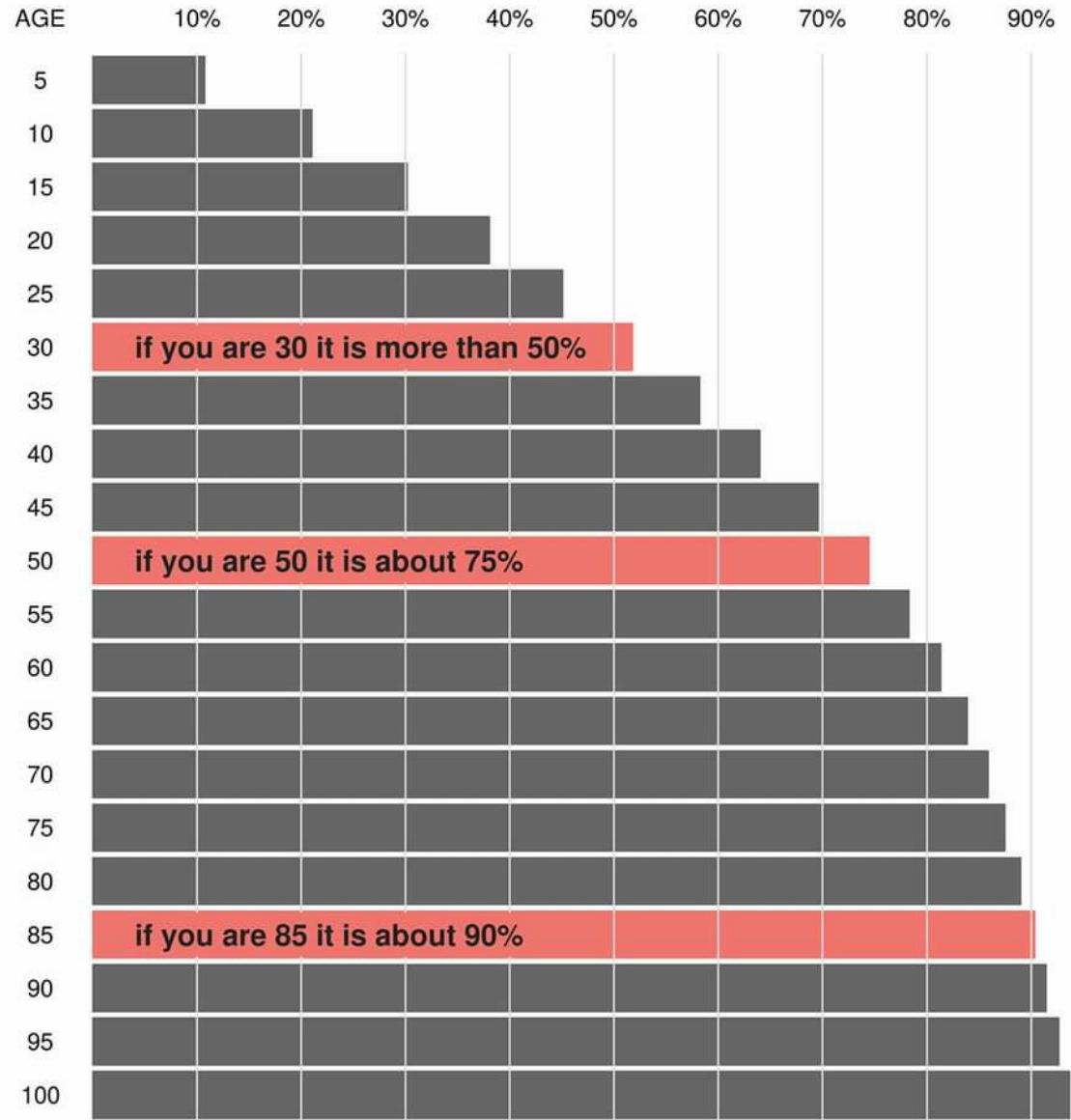
- ▶ If you were 50 years old today, what proportion of global fossil fuel emissions since 1751 have occurred over your lifetime?
  - a) 45%
  - b) 55%
  - c) 65%
  - d) 75%
  - e) 85%





# How old are you?

Percentage of Global fossil fuel emissions (since 1751) occurring in my lifetime



Source: @neilrkaye based on data from CDIAC and globalcarbonproject.org  
<https://twitter.com/neilrkaye/status/1365247133507604486?s=20>



# Managing sustainability risks

- ▶ Qualitative methods of assessment
  - ▶ Scenarios, narratives
  - ▶ Unexpected linkages
  - ▶ Are they extreme enough?

*The biggest risk is inaction today.* Mark Carney



# Specific risk management challenges

- ▶ Do the models remain valid?
  - ▶ Modern portfolio theory
  - ▶ Mortality
  - ▶ ...
- ▶ Appropriate scenarios
  - ▶ Encompassing assets and liabilities
- ▶ Can't hedge a global systemic risk



# Incentivising and supporting

- ▶ Green finance
  - ▶ Additionality
- ▶ Divestment
- ▶ Impact investing
- ▶ New covers and policy structures

*Do we invest money into the practices that take us deeper into this crisis or in the solutions that could get us out of it?* David Attenborough



# Serving end users

- ▶ New covers and policy structures
- ▶ Passive investing
- ▶ Default options
- ▶ Lifestyling

*A 4C world is uninsurable.* Thomas Buberl, AXA



# What's the point?

- ▶ What's the purpose of investment? Pensions?  
Insurance?
- ▶ Universal ownership



# Challenges for regulators

- ▶ Is regulation for short term solvency and consumer protection consistent with supporting mitigation and adaptation?
- ▶ Market doesn't reflect the risks



# Challenge and opportunity

- ▶ The biggest business and career opportunity in several lifetimes

*Climate change has become a defining factor in companies' long-term prospects.* Larry Fink, BlackRock





# Questions And Answers



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# Thank You For Listening



## Forthcoming Events

- Mon, 22 Mar (16:00-16:45) TLA Blockchain – Legal & Regulatory Guidance

### EsopCentre Fourth British Isles Share Schemes Symposium

- Tue, 23 Mar (10:30) All-Employee Share Plans And Share Plan Regulation
  - Web, 24 Mar (10:30) Executive Equity Incentives
  - Thu, 25 Mar (10:30) Employee Share Ownership Opportunities For Smaller Companies
- Fri, 26 Mar (15:00-15:45) Did The Market Move For You? Artificial Intelligence, Financial, & Commodity Trading

Visit <https://fsclub.zyen.com/events/forthcoming-events/>