

2023 Living to 100

Discussant Comments

Climate Change Effects

NOVEMBER | 2023



Mortality
and Longevity



Aging and
Retirement





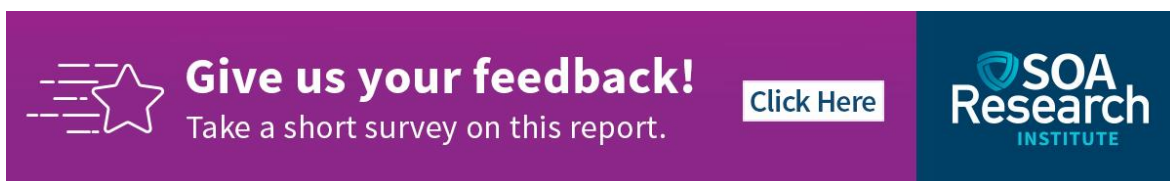
2023 Living to 100 Discussant Comments



Climate Change Effects

AUTHOR Matthew Morton, FSA, MAAA
Principal Consulting Actuary
Illumifin

SPONSORS Mortality and Longevity Strategic
Research Program Steering
Committee

Aging and Retirement Strategic
Research Program Steering
Committee



 **Give us your feedback!**
Take a short survey on this report. [Click Here](#) 

Caveat and Disclaimer

The opinions expressed and conclusions reached by the authors are their own and do not represent any official position or opinion of the Society of Actuaries Research Institute, Society of Actuaries, or its members. The Society of Actuaries Research Institute makes no representation or warranty to the accuracy of the information.

Copyright © 2023 by the Society of Actuaries Research Institute. All rights reserved.

2023 Living to 100 Discussant Comments

Climate Change Effects

The two papers represent the outcomes of investigations into the impacts of climate change:

1. Each publication offers a distinct viewpoint on how climate change is affecting society.
2. Rather than using the authors' own research, each paper uses that of others.
3. Each publication discusses the cause-and-effect cycle of climate change and offers suggestions along the way.
4. Every paper correctly acknowledges the difficulty of the subject.

Population Aging, Global Climate Change and Social Security: An International Perspective by Sally Shen and John A. Turner

The purpose of the Shen and Turner paper is to explore the possibility of a link between the aging population, social security policy and climate change from a global viewpoint. The article aims to influence policy decisions that will ultimately affect climate change.

The authors provide background and information that the analysis is built upon. The paper indicates the following:

- Malthusian Theory is introduced to the reader. It holds that population growth will outpace the growth of food supply and eventually will be insufficient to support the population.
- Modern Malthusian Theory is tied to climate change as it adversely affects the population by affecting food supply.
- Greenhouse emissions predominately come from high-income areas and affect those in low-income areas.
- The paper identifies declining birth rates and pronatalist policies and discusses their influence on climate change.

The authors make various recommendations as a way to wrap up the paper. They first suggest neutral pronatalist measures to slow climate change. Second, they advocate a multilevel strategy to slow climate change.

One of the major contributions of this study is to show the overlap of numerous concerns causing and arising from climate change. It provides information and sources from various studies, and it makes an effort to link economic-intentioned actions to unintended effects on climate change and, consequently, economic and mortality influence.

I believe the following items, if incorporated by the authors, would improve the effectiveness of the paper's argument:

- Consider increasing the interconnectivity between the topics: many facets to the paper, each with their own merit, and how can they be more connected analytically;
- Document and consider opposing views;
- Draw upon further from examples.

Even though this paper aims to influence policy decisions, the actuarial community can benefit from it. Actuaries should focus on whether there are unintended implications of current economic policy that have negative effects.

Climate Change and Mortality: Time for Actuaries to Pay Attention! by Sam Gutterman

It appears that the purpose of this study is to raise awareness of climate change and how it affects actuarial assessments, specifically mortality and longevity. A mortality or longevity actuary interested in comprehending the risk posed by climate change can use the material and research presented in this paper as a foundation.

The author gives the reader background information. Climate change is not an immediate concern for actuaries in the area of mortality and longevity. This essay aims to increase understanding. It displays several statistics that are pertinent to mortality trends linked to climate change. Additionally, crucial factors are covered when looking up data and thinking about modeling.

The author aims to clarify illusions about the impact of climate change, especially in the insurance business, and convince the industry to take both immediate and long-term effects into account. This study clearly has applications to the actuarial community. It gives actuaries in the life and annuity sector statistics and theoretical modeling concepts for taking climate change into account.

There are clear benefits originating from this paper for the actuarial audience, including the following:

- Provides a variety of sources and methods to consider mortality the longevity risks for the insurance industry;
- Addresses potential myths and misconceptions about climate change;
- Identifies a significant number of mortality impacts for life and annuity actuaries that may be considered.

I suggest the author take into account giving concrete examples of how insurers are now using these analyses. The audience would be inspired to research and incorporate this knowledge into their analyses by this useful advice.

About The Society of Actuaries Research Institute

Serving as the research arm of the Society of Actuaries (SOA), the SOA Research Institute provides objective, data-driven research bringing together tried and true practices and future-focused approaches to address societal challenges and your business needs. The Institute provides trusted knowledge, extensive experience and new technologies to help effectively identify, predict and manage risks.

Representing the thousands of actuaries who help conduct critical research, the SOA Research Institute provides clarity and solutions on risks and societal challenges. The Institute connects actuaries, academics, employers, the insurance industry, regulators, research partners, foundations and research institutions, sponsors and non-governmental organizations, building an effective network which provides support, knowledge and expertise regarding the management of risk to benefit the industry and the public.

Managed by experienced actuaries and research experts from a broad range of industries, the SOA Research Institute creates, funds, develops and distributes research to elevate actuaries as leaders in measuring and managing risk. These efforts include studies, essay collections, webcasts, research papers, survey reports, and original research on topics impacting society.

Harnessing its peer-reviewed research, leading-edge technologies, new data tools and innovative practices, the Institute seeks to understand the underlying causes of risk and the possible outcomes. The Institute develops objective research spanning a variety of topics with its strategic research programs: aging and retirement; actuarial innovation and technology; mortality and longevity; diversity, equity and inclusion; health care cost trends; and catastrophe and climate risk. The Institute has a large volume of topical research available, including an expanding collection of international and market-specific research, experience studies, models and timely research.

Society of Actuaries Research Institute
475 N. Martingale Road, Suite 600
Schaumburg, Illinois 60173
www.SOA.org